THE MYERS-BRIGGS TYPE INDICATOR AND PEER HELPER PERSONALITY CHARACTERISTICS

By

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TABLE OF CONTENTS

		Page
ACKNOWLEDGMENTS		ii
LIST OF TABLES		vii
ABSTRACT		ix
CHAPTERS		
1	INTRODUCTION	1
	The Need for the Study	4
	Statement of the Problem	8
	Purpose of the Study	10
	Rationale for the Study	11
	Research Questions	12
	Definition of Terms	13
	Organization of the Study	14
2	REVIEW OF THE LITERATURE	15
	The Characteristics of Effective Helpers	16
	The Myers-Briggs Type Indicator (MBTI)	21
	General Description	21
	Reliability of MBTI	24
	Validity of MBTI	26
	Personality Type and the Four Temperaments	30
	Sensing and iNtuitives	31
	Four Temperaments	32
	Styles of the Four Temperaments	32
	Personality Type and Career Choices	34
	The MBTI and Other Personality Measures	39
	Limitations of the MBTI	44
	Peer Helpers	45
	Early History of Peer Helping	45
	Readiness and Receptiveness	53
	Readiness for Learning	53
	Receptiveness for Training	56
	Training Outcomes and Effectiveness	58
	Outcomes of Training	58
	Learning Strategies	60
	Readiness for Projects	61
	Peer Helper Rating Scales	63
	Peer Helper Readiness	63
	Peer Helper Personality and Receptiveness for Training	63

The Training of Peer Helpers 69
Peer Helper Participation 71
Training Activities 71

3 METHODOLOGY 73

Population and Sample 73
Hypotheses 77
Research Overview 78
Instruments 80
The Myers-Briggs Type Indicator 80
Peer Helper Rating Scale (PHRS) 82
Research Procedures 83
Data Collection 84
Analysis of the Data 84

4 ANALYSIS OF DATA 86

Sample 86
Reliability of the Peer Helper Rating Scale (PHRS) 87
Interrater Reliability 87
Interrater Reliability of PHRS 88
Coefficient Alpha Procedure of PHRS 88
Test-Retest Reliability of PHRS 90
Hypotheses Testing 90
Hypothesis 1: Personality Temperament 91
Hypothesis 2: Receptiveness to Training 93
Hypothesis 3: Readiness to Help Others 93
Hypothesis 4: Temperament and Receptiveness to Training 95
Hypothesis 5: Temperament and Readiness to Help Others 96
Hypothesis 6: Gender, Temperament, and Receptiveness for Training 98
Hypothesis 7: Gender, Temperament, and Readiness to Help Others 99
Hypothesis 8: Ethnicity, Temperament, and Receptiveness for Training 99
Hypothesis 9: Ethnicity, Temperament, and Receptiveness for Training 100

5 SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS 105

Summary of Research Study 105
Conclusions 106
Temperament of Peer Helpers vs. Temperament of General Student Population 106
Peer Helper Receptiveness for Training and Its Relationship to Sensing (S) and iNtuitive (N) Types and Peer Helper Readiness to Help Others and Its Relationship to Sensing (S) and iNtuitive (N) Types 107

Peer Helper Receptiveness for Training and Temperament Type; Peer Helper Readiness to Help Others and Temperament Type 110
Peer Helper Temperament and Gender and Their Receptiveness for Training; Peer Helper Temperament and Gender and Their Readiness to Help Others 117
Peer Helper Ethnicity and Temperament and Their Receptiveness to Training; Peer Helper Ethnicity and Temperament and Their Readiness to Help Others 118
Limitations 119
Implications and Recommendations 119

APPENDIX

A PEER HELPER RATING SCALE 126

REFERENCES 128

BIOGRAPHICAL SKETCH 148

LIST OF TABLES

Table		Page
1	Peer Helper Population By School Year.....	74
2	Peer Helpers by Temperament Type.....	75
3	Peer Helpers by Gender.....	75
4	Peer Helpers by Ethnicity.....	76
5	Interrater Reliability of PHRS.....	88
6	The Test-Retest Reliability of PHRS.....	91
7	Expected Temperament Types Among Traditional Age High School Students.....	92
8	Temperament Types by Gender in Peer Helper Population.....	92
9	Source Table for the Analysis of Variance for the Peer Helper Receptiveness to Training and Sensing and iNtuitive Types.....	94
10	Source Table for the Analysis for Variance of Peer Helper Readiness to Use Training and Sensing and iNtuitive Types.....	94
11	Source Table for the Analysis of Variance of Peer Helper Temperament and Receptiveness for Training.....	95
12	Source Table for the Tukey HDS Test for Temperament and Receptiveness for Training.....	96
13	Source Table for the Analysis of Variance of Peer Helper Temperament and Readiness to Help Others.....	97
14	Source Table for the Tukey HDS Test for Temperament and Peer Helper Readiness.....	97
15	Source Table for the Analysis of Variance of Peer Helpers' Gender and Temperament and Their Receptiveness for Training.....	98

16 Source Table for the Analysis of Variance of Peer Helper Readiness to Help Others and Gender and Personality Temperament 99

17 Source Table for the Analysis of Variance of Peer Helper Receptiveness for Training and Ethnicity and Personality Temperament 100

18 Source Table for the Analysis of Variance of Peer Helper Readiness to Help Others and Ethnicity and Temperament 101

19 Source Table for the Analysis of Variance for All Independent Variables Tested and Peer Helper Receptiveness to Training 102

20 Source Table for the Analysis of Variance for All Independent Variables Tested and Peer Helper Readiness to Help Others 103

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By

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The purpose of this study was to examine how personality type and temperament, as measured by the Myers-Briggs Personality Type Indicator (MBTI), were related to high school peer helpers' receptiveness to training and readiness for helping others in projects. The population consisted of 245 students who were enrolled in a training program at Gainesville High School, Gainesville, Florida, during the years of 1990-1993. The training of students took place during an academic elective class which met 4 days a week.

Two criterion instruments were used in the study, one to determine personality temperament and the other to estimate (a) receptiveness to training and (b) readiness to help others following training. The MBTI was used to measure personality temperament. A Peer Helper Rating Scale (PHRS), with a Likert-type assessment and developed by the

researcher, assessed receptiveness to training and readiness to help others.

The MBTI was administered to the peer helpers during the first semester of each school year. The PHRS was used by four rater/trainers who helped train students. The raters rated each student in terms of their receptiveness to training and readiness to help others.

Chi-square and a single factor analysis of variance and a two-factor analysis of variance were used to analyze the data. A Tukey HDS was run when a significant effect was found following the ANOVA statistical procedure.

The peer helper students studied were significantly different from the traditional high school students in terms of temperament. In addition, Sensing and iNtuitive types were different in regard to their receptiveness for training and readiness to help others. The four pairs of temperaments (NF, NT, SJ, SP) showed significant difference with respect to receptiveness for training and readiness to help others. The analysis showed no significant differences between all other variables studied, including gender and ethnicity. It was suggested that peer temperament may be an important factor in peer helper receptiveness to training and readiness to help others.

CHAPTER 1
INTRODUCTION

One of the most interesting and innovative educational endeavors of our time is the development of peer facilitator programs, where young people are trained to help their peers and others. This movement is taking place across the nation. Students are systematically organized and trained to be of assistance to others (Myrick & Folk, 1991).

Some people seem to have an inclination for helping others. Their personalities and attitudes lend themselves to the helping process. They can, however, learn to go beyond befriending someone out of kindness. Rather, with training, peers can use skills to help people explore ideas, discover more about themselves, and solve problems. The helping process can be especially productive when peers are prepared or trained (deRosenroll, 1991).

There has been an increase of problems in our society, many of which affect adolescents. For example, 7 million children of alcoholics are at risk for psychological impairment, alcoholism, physical abuse, sexual abuse, mental abuse, or membership in dysfunctional families. Seventy-five percent of high school students report using alcohol, the drug most widely used in grades 6 through 12. Of the 34,000 Florida juveniles in detention this year, over 50% are estimated to be in need of alcohol and drug abuse services

(Florida Alcohol and Drug Abuse Association, 1992). The frequency of Acquired Immune Deficiency Syndrome (AIDS) continues to increase in our society, putting teenagers at risk of dying. A recent ABC television poll reported that more than 75% of teenagers are sexually active before graduating from high school (McBride, 1992).

At the same time, educational budgets are being reduced and resources available to address adolescent problems are stretched. Recently, over half of the states in the U.S. cut education budgets for the fiscal school year 1992-1993 (Greenstein & Leonard, 1992).

School counselor-student ratios are high at all grade levels in most schools, frequently limiting counseling to crisis situations. Those students who have the most noticeable problems tend to receive help, while others are forced to work on problems by themselves. Too many school counselors and other specialists feel trapped under noncounseling related tasks. Often, it is only the most assertive students who reach a counselor for assistance. Even then, a majority of students know very little about the counselors, school psychologists, social workers, and other helping specialists, and therefore hesitate to seek their help (Myrick & Folk, 1991).

One approach to providing more services, one which is also receiving more attention in the professional literature, is the use of student peer facilitators. Peer facilitator programs, as a supplement to counseling and guidance

services, have been recommended by the American School Counselors Association (ASCA). The ASCA (1979, 1990) specifically encouraged the use of trained students helpers with students who have school problems. The ASCA position paper also stated that peer influence may be the strongest single motivational force in teenagers' lives and that school counseling staffs should design programs to capture that power.

Peer helping programs have been implemented in school systems and community agencies throughout the United States and Canada. Counselors and teachers are training students to help other students in many ways (Carr, 1989; deRosenroll, 1991; Myrick & Sorenson, 1988; Myrick & Folk, 1991; Sachnoff, 1984; Schmidt, 1988; Varenhorst, 1984). For example, peers can be used to provide information, aid counselors in crisis interventions, tutor others in academic skills, and assist people to make decisions (Warner & Scott, 1974). They also can be organized to meet the specific needs of a student body or population. Peer helpers have worked effectively to improve the grades of low achievers (Canning, 1983; Reardon, 1990); to orient underclassmen to their schools (Bogat, Jones, & Jason, 1980); and to curtail and redirect disruptive behavior (Folk, 1982; Mastroianni & Dinkmeyer, 1980).

Maher and Christopher (1982) discovered that there were no differences in the outcomes of group counseling conducted by senior high school peer helpers compared to groups conducted by professionals. In many training programs peers

were asked to learn skills in good listening, problem-solving, and facilitation. These are the same skills professional counselors learn and use in their profession.

Even though peer facilitators and peer helper programs are in existence at all grade levels (Tindall & Salmon-White, 1990), high school programs are the most prevalent. First, the general peer helper movement started at this level and, second, it was assumed that teenagers have similar adult helper characteristics and could work in many cross-age projects.

Some states, such as Florida, have peer helper courses in high schools which can be taken for elective credit. In a few cases, some students were selected to participate in a weekend-retreat training program in lieu of an academic course. In other instances, some students were selected to take part in a particular helping project. Regardless, trainers and program coordinators were always faced with the issue of selection and training. Who should be a peer facilitator? Who was most likely to respond favorably and quickly to training? After training, who was most likely to be prepared to work with others?

The Need for the Study

Peer helper training programs are relatively new. Most organized programs started during the 1970s. Initially, a few selected students in high schools were identified as potential leaders and facilitators. Typically, they were recommended by their teachers on the basis of general

adjustment to school and academic achievement. In more recent years, training programs have been broadened to include students who are representative of a student body. In some cases, low-achieving students had been asked to be facilitators because they were part of a group that was having problems. Many of these facilitators also benefited from the experience and became better adjusted to school (Reardon, 1990).

Almost all trainers seemed to agree that a student's caring attitude and friendly demeanor were assets in peer helping (deRosenroll, 1990). They also looked for certain personality characteristics and frequently included them on a checklist that teachers and others might use when recommending students for the program (e.g., trustworthy, verbal, friendly, responsible, or empathetic) (Myrick & Folk, 1991). Studies of personality type and helper effectiveness have been conducted (Beck, 1973; Buchanan & Bandy, 1984; Burt, 1981; Carskadon, 1979; Handley, 1982; Harman, 1982; Holmes, 1983; Kim, 1981; Petrasek, 1982; Sheridan, 1978). However, these studies have focused on practicing, professional helpers. To what degree these personality traits were related to training and peer helper readiness was unknown.

There is some evidence that personality type is related to the development of professional helpers. Over the past 20 years researchers have associated personality type with specific careers (Berger, 1985; Macdaid, McCaulley, & Kainz,

1987; McCaulley, 1977; Myers, 1987; Myers & McCaulley, 1985; Myers & Myers 1980; Pinkey, 1983). Several investigators (e.g., Buchanan & Bandy, 1984; Hammer & Treeger, 1985; Howes, 1983) found that certain personality types seemed to be highly associated with specific helping jobs or careers. Evidence of a relation between choice of profession and personality type can be found in the Myers-Briggs Type Indicator (MBTI) Data Bank of the Center for Applications of Psychological Type, in published research, and in data contributed by MBTI users. For example, studies with the MBTI have shown that adult counselors, therapists, and mental health practitioners were more frequently extroverted, iNtuitive, feeling-oriented and divergent in their thinking (ENFP), followed by introverted, intuitive, feeling-oriented and perceptive (INFP) and introverted, iNtuitive, thinking and perceptive (INTP) (Buchanan & Bandy, 1984; Canale, 1976; Elliott, 1975; Gavin, 1976; Herrick, 1976; Perry, 1975). Furthermore, accountants and executive managers were introverted, sensing, thinking, and judging (ISTJ) (Jacoby, 1981; Macdaid, McCaulley, & Kainz, 1987; Otte, 1984; Pollitt, 1982). This contrasts with the ENFP personality type which includes psychologists, counselors, and social workers.

More recently, researchers have been looking at four 2-letter combinations of personality type called temperaments, because they afford the widest base of accurate behavioral predictions (Kroeger & Thuesen, 1988; Keirsey & Bates, 1984). Temperament is being used to predict things

such as how people teach, learn, lead others, entertain, and relate to others (Keirsey, 1987).

Many young peer helpers go through training similar to beginning counselors and therapists. Further, many peers are self-selected into the training programs. Therefore, although peer helpers are not professional helpers, there may be a relationship between personality type and temperament, interest, receptiveness to training, and readiness. Are the same traits or types associated with adult helpers also related to adolescent peer helpers? This study was designed to test the hypothesis that this is the case.

The actual selection of peer helpers is a primary concern of educators who start and manage peer helping programs (Besecker & Aug, 1985). Who will be most receptive to training? Which ones will find the training most effective?

It is assumed that personality type and personality temperament are strong indicators of success in a peer helper program. Personality type and temperament are almost universally used as a selection factor; however, it is most frequently derived from the general perceptions of teachers and trainers. A routine survey of trainers in the state of Florida would indicate that few, if any, include standardized assessment as part of the selection process. Therefore, data about personality type and personality temperament as selection factors and their relationship to training receptiveness, as well as peer readiness, are nonexistent.

There are over 500 references from the Educational Research Information Clearinghouse (ERIC), from 1978 to 1992, dealing with MBTI, personality type, and personality temperament. A study completed at McGill University investigated the relationship between four commonly utilized criteria of counselor effectiveness and personalities of college freshmen being rated (Leard & Hum, 1978). However, nothing in the literature relates directly to peer helpers.

In addition to personality temperament being a selection factor, it is also recognized that there is a need to provide students with the best training approach. Some students, because of personality temperament, may be less responsive to common or conventional procedures that have been recommended by trainers and which are found in the professional literature (Downe, Altmann, & Nysetvold, 1986). Therefore, there is a need to examine personality temperament as it is related to the selection of peer helpers, their receptiveness to training, and readiness in peer helper roles.

Statement of the Problem

Peer helpers have helped relieve some of the professional manpower shortages in schools and communities. The research has shown that because peers communicate, listen to, and are influenced by each other, having trained paraprofessionals or helpers available only improves upon an already "naturally occurring" process (Carkhuff, 1969; Carr, 1989; Hamburg & Varenhorst, 1972; McManus, 1988; Myrick & Erney, 1979; Myrick & Folk, 1991; Samuels & Fain, 1977;

Vassas, 1971). Research has identified particular applications that have yielded the greatest impact on youth in the areas of substance use prevention/reduction (Brines, 1990), student attitudes and social skills (Hannaway & Senior, 1989), school behavior and attendance (Huey, 1984), academic performance (Reardon, 1991), reading-level improvement (Carlton, 1985), higher self-esteem among at-risk students (Crouse, 1985; Foster, 1991), and anxiety and stress reduction during life transitions (Maher & Christopher, 1982). Peer helping programs provide effective interventions in certain situations.

The problem, however, is in determining whether, prior to training, trainers can determine which peer helpers will be receptive to training and make the most effective helpers. If students who may have certain difficulties with peer training could be identified, then trainers might adjust their curriculum to make it more meaningful and effective. Furthermore, if students who are naturally more receptive to training and are more likely to be effective at the tasks of peer helping could be identified, then trainers may be able to develop more effective helping projects.

Generally, persons who have positive impact on others are described as sensitive, understanding, and open (Rogers, 1970). If peers are seen as a friendly and caring, then others are more likely to be drawn to them. One researcher who attempted to evaluate the qualities of an effective counselor in a precise, empirical manner was Carl Rogers.

His "conditions of therapy" included empathy, genuineness, and unconditional positive regard (Rogers, 1957).

Several of the self-reporting personality profiles have been used in researching counselor effectiveness. These include the Myers-Briggs Type Indicator (MBTI), the Edwards Personal Preference Schedule and the Sixteen Personality Factor Questionnaire (Jackson & Thompson, 1971; Myrick, Kelly, & Wittmer, 1972; Leard & Hum, 1978; Rowe, Murphy, & DeCsipkes, 1975). In the present study, the MBTI was chosen, in part, because it is the most widely used (McReynolds, 1981).

Knowledge of which specific personality temperament is closely related to readiness for peer helping may be useful in establishing a criterion beneficial in the selection and training of students as peer helpers. Therefore, the results of this research could be used to demonstrate the relationship between using the MBTI as a tool in the selection of peer helpers and development of more effective training methods. Furthermore, it could be used to add to the theory underlying the MBTI, personality type and temperament.

Purpose of the Study

It was the purpose of this study to examine how personality type, more specifically, personality temperament is related to peer helper receptiveness to training and readiness for helping others following training. Four 2-letter combinations of personality type, as measured by the

Myers-Briggs Personality Type Indicator, were studied in terms of their relationship to high school students who had been selected to be prepared as peer facilitators and these students' subsequent receptiveness to training and readiness for helper projects. Is one of the personality temperament types likely to be more receptive to the peer helping training? Is there a significant relationship between personality temperament and readiness for helper projects?

Rationale for the Study

Jung's theory of psychological type and the MBTI have practical applications in research and counseling. The MBTI manual contains chapters devoted to uses of the MBTI in counseling, careers, and education. The appendix of the MBTI manual includes extensive summary tables of occupational preferences. High school students have used the MBTI in career planning and as a vehicle for understanding differences (Myers & McCaulley, 1985).

Research concerning the relationship between peer helper personality temperament and their receptiveness to training and readiness to help others should shed light on use of the MBTI in the peer helper selection process. Further, this research will provide additional information to the evaluation of potential peer helpers' progress in peer helping programs. In addition, this research will provide counselors/peer helping trainees with information on personality temperament, gender, and ethnicity, and an indicator of success in the peer helping program.

Research Questions

The questions addressed in this study were as follows:

1. Are there differences among personality temperaments of high school students in the general (school) population and those in peer helping programs?

2. Is there a significant difference in peer helper receptiveness for training, as measured by a Peer Helper Rating Scale, between sensing (S) and iNtuitive (N) types?

3. Is there a significant difference in peer helper readiness to help others, as measured by a Peer Helper Rating Scale, between sensing (S) and iNtuitive (N) types?

4. Is there a significant difference in peer helper receptiveness for training as a function of personality temperament?

5. Is there a significant difference in peer helper readiness to help others as a function of personality temperament?

6. Is there a significant interaction effect of gender and personality temperament of the peer helpers on their receptiveness for training?

7. Is there a significant difference interaction effect of and personality temperament of the peer helpers on their readiness to use training?

8. Is there a significant interaction effect of the ethnicity and personality temperament of the peer helpers on their receptiveness for training?

9. Is there a significant interaction effect of the ethnicity and personality temperament of the peer helpers on their readiness to help others?

Definition of Terms

For the purpose of this study, terms are defined as follows.

Ethnicity refers to ethnic classification; for this study, Caucasoid, African American, Hispanic, and Asian.

General Population of High School Students for the purpose of this study refers to data from the MBTI Data Bank of the Center for Applications of Psychological Type, Gainesville, Florida.

Peer Helper is a high school student who has participated in a training program during an academic school year and who provides services to other students in helping projects.

Peer Helping Training refers to a course of preparation where peers learn basic counseling, communication, or interpersonal skills.

Peer Facilitator or Peer Counselor is used synonymously with peer helper.

Peer Trainers refers to a professional teacher or counselor who teaches, coaches and supports students who are learning to be peer helpers.

Personality Type is a set of personal characteristics compiled from a self-report personality indicator.

Peer Helper Readiness refers to the degree to which a peer helper is prepared through training to perform peer helping duties. This includes understanding and using the facilitative model, self-disclosing feelings and ideas, understanding and using group procedures, and being dependable, caring, and trustworthy.

Receptiveness to Training refers to the degree to which a peer helper is interested, eager and open to peer helping concepts and training activities.

Temperament refers to one's natural disposition or nature measured by a two-letter combination of type first described in research by Keirsey and Bates (1984). All 16 types fall into one of four temperaments: NF, NT, SJ, SP.

Organization of the Study

The remainder of this study is organized into four chapters and the appendices. A review of the literature relevant to this study is discussed in Chapter 2. A description of the research design, including the subjects, methodology, and procedures to be used is provided in Chapter 3. Results will be presented in Chapter 4. Conclusions drawn from the study, their significance, and areas recommended for further study will be presented in Chapter 5.

CHAPTER 2
REVIEW OF THE LITERATURE

There are many helpers in our society today, including doctors, nurses, teachers, ministers, counselors, therapists, and peers. Peer helpers are high school students who have received special training that enables them to assist others. These students learn concepts and skills in order to help others to think about their feelings and ideas, to explore alternatives, and to make responsible decisions. Like most people, adolescents want to feel special and needed. They want to do things which bring them favorable recognition and which demonstrate that what they do is of value. Peer helping programs give them a vehicle to achieve their goal (Sturkie & Phillips, 1991).

Peer programs have rapidly increased across North America, accompanied by a number of roles for peers to play (Gray & Tindall, 1978). Originally developed for secondary schools, peer helping programs can be found in community organizations, universities, colleges, recreation centers, hospitals, senior citizen agencies, and elementary schools. And these programs have focused on different ethnic and cultural groups, gifted children, mentally retarded, incarcerated inmates, and other special populations (Thomas & Tindall, 1990). This study focuses primarily on secondary school peer helping programs.

While peers who provide services often do so under different identifying titles such as peer counselors, peer facilitators, peer helpers, peer support workers, or peer learning assistants, for example, they are united under the common theme of peers helping peers (D. deRosenroll, personal communication, January 9, 1992). St. Louis, MO. In this study, secondary school students who have received the peer training will be called peer helpers.

Peer trainers and program coordinators selected students for training who might benefit from the experience and provide a valuable service to others through helping projects. Some students more than others seem to be excited to help. Some appear to have timely support and encouragement, while others do not or must struggle with the training and helping processes. There are students who are eager to take part in training activities, while others are reticent, more cautious, and less enthusiastic. It is often assumed that some personalities, more than others, lend themselves to learning helping skills quickly and are better prepared to enter peer helping projects. Despite these common conclusions, however, there is no supporting evidence to indicate that peer helpers differ in their personality type, their receptiveness to training, and their subsequent ability to help others.

The Characteristics of Effective Helpers

What are the characteristics to look for in the selection of a helper? This is an important issue when starting any kind

of helping program. Characteristics of effective helpers have been examined in relationship to several selected variables. More specifically, research investigations involving effectiveness and success in counseling include areas such as the Rogerian model, microcounseling, cognitive flexibility, client perceptions, self-disclosure/awareness, values and interests, academic aptitude and grade point average, and observational learning (Myrick & Folk, 1991).

Carl Rogers was among the first to emphasize that there are helping characteristics common to effective helpers. His "conditions of therapy" include empathy, genuineness, and unconditional positive regard (Rogers, 1957). He referred to these conditions as the therapeutic triad.

One of the earliest studies that attempted to relate the counselor's level of Rogers' therapeutic triad to client outcome was conducted by Haimowitz (1950). After selecting brief samples of therapy interviews from 10 most successful and 10 least successful therapy cases, she rated the samples on a scale based on Rogers' work. The results indicated that the most successful cases showed significantly higher levels of the three conditions.

As a result of a study of psychotherapy with hospitalized schizophrenic patients, several research reports were published. In one of the first studies, Truax (1971) compared the levels of accurate empathy in hospitalized patients who showed improvement on several personality tests and who showed deterioration after 6 months of intensive

therapy. Results indicated that the therapists whose patients improved rated consistently higher on accurate empathy than those whose patients deteriorated.

Similarly, Strong (1968) investigated the effect of therapist level of positive regard. His findings indicated that successful therapy cases had received higher levels of positive regard as compared to both failure and indeterminant cases.

Christie and Geis (1970) divided therapy clients into three groups: those showing positive change, those showing negative change, and those essentially unchanged. After comparing these outcomes with levels of therapist congruence or genuineness, the results suggested that the mean levels for both the improved and unchanged clients were higher than the mean level for deteriorated clients,

According to Truax & Carkhuff (1967), the preceding studies exemplify the nature of the research concerning Rogers' therapeutic triad. That is, counselors who are accurately empathic, show positive regard, and genuine concern are indeed effective. The greater the degree to which these factors were found in the counseling encounter, the greater was the subsequent personality change in the client.

Personality type has been related to choice of career, career satisfaction, and counselor effectiveness. Macdaid, McCaulley, and Kainz (1987) in The MBTI: Atlas of Type Tables, has summary listings of professions in each of 44

subgroupings showing significant correlations between personality type and chosen profession. This atlas is the result of reviewing more than 500 studies using the MBTI. For example, McCaulley (1976), in a longitudinal sample of engineering students and practicing engineers showing specialty choice, found engineering attracts more introverts, thinking, and judging types. Civil engineering attracted significantly more sensing types; nuclear and aerospace engineering, more intuitive types. A significant correlation between personality type and job satisfaction with chosen career has been found (Conner, 1980; Harrison, 1983; Hughes, Moiser, & Hunt, 1981).

Among the social helping types a number of studies have been done. The type of the 44 most promising applicants to a year-long internship in psychodrama at Saint Elizabeth's Hospital in Washington, DC, were studied; ENFP was the most frequent type, followed by INFP and INTP. The entire group was heavily N and NF significantly more than a comparison group of general practitioners (Buchanan & Bandy, 1984). Brown (1981) researched career satisfaction of 118 occupational therapists in the state of Florida. Four types, ISFJ, ENFP, ENTJ, and ISTJ were the most frequent in the sample. In a study of 36 Lutheran clergymen who were graduates of Concordia seminary in St. Louis, ESFJ's predominated (Breimeier, 1972). Not only the selection of the profession seems to be related to personality type but also the satisfaction with the chosen profession.

One area of study has been those who work with others regarding personal problems and development (Buchanan & Bandy, 1984; Hammer & Traeger, 1985; Howes, 1983; Myers & McCaulley, 1985). A paper presented at the American Psychological Association summarizing the data on Isabel Myers' longitudinal study of over 5,000 medical students from 45 medical schools reported the relationship of medical students' psychological type to their specialties 12 years later. More I, N, and F were attracted to medicine, specialty choices significantly in the direction predicted from type theory. For example, INFP and ENFP were the common types in psychiatry, whereas pathology had more ISTJ's. Myers and McCaulley (1985), in their Manual: Guide to the Development and Use of the Myers-Briggs Type Indicator (1985), described personality types individually and in various groupings. The manual contains chapters devoted to uses of the MBTI in counseling, careers, and education. The appendix includes extensive summary tables of occupational preferences.

However, more recently noncertified persons, such as paraprofessions, volunteers, and peer helpers have also been recognized as possible helpers. In particular, young people receiving specialized training are becoming peer helpers (Farrell & Sachnoff, 1991).

The Myers-Briggs Type Indicator (MBTI)

General Description

The Myers-Briggs Type Indicator (MBTI) is an untimed, 126-item inventory that yields four dichotomous scores indicating respondent preferences for different activities. The four preferences are: (a) extraversion versus introversion (E/I)--social as opposed to solitary settings are preferred; (b) sensing versus intuitive (S/N)--immediate realities versus opposed to future, hypothetical possibilities guide perceptions about alternatives; (c) thinking versus feeling (T/F)--impersonal logic as opposed to personal subjectivity influence judgements; and (d) judging versus perceiving (J/P)--plans, adherence, and decisiveness as opposed to openness, flexibility, and tentativeness are preferred in activities.

The Myers-Briggs Type Indicator (MBTI) is one of a growing number of psychological instruments concerned primarily with variations in normal attitudes and behavior, rather than with psychopathology. Myers ([1962] 1975) introduced the manual with this statement:

> The purpose of the Indicator is to implement Jung's theory of type [1923]. The gist of the theory is that much apparently random variation in human behavior is actually quite orderly and consistent, being due to certain basic differences in the way people prefer to use perception and judgement. (p. 3)

'Perception' is here understood to include the processes of becoming aware--of things, people, occurrences, or ideas. 'Judgment' is understood to include the processes of coming-

to-conclusions about what has been perceived. If people differ systematically in what they perceive and the conclusions they come to, they may, as a result, show corresponding differences in their reactions, in their interests, values, needs, and motivations, in what they like best to do.

Adopting this working hypothesis, the Indicator aims to ascertain, from self-report of easily reported reactions, people's basic preferences in regard to perception and judgment, so that the effects of the preferences and their combinations may be established by research and put to practical use (McReynolds, 1981).

Widely available only since 1975, the MBTI is currently employed as a counseling tool for self-understanding and in career planning, as a technique for improving educational practice through an understanding of type differences in teaching and learning styles, and as a device for working with families and groups to improve communications, teamwork, and leadership. Further, an increasing number of studies, in both theoretical and applied areas, have supported the construct validity of the MBTI. A number of these studies will be reviewed in this chapter.

The history of the MBTI began early in this century, when Katharine C. Briggs became interested in personality differences and developed her own typology from biographies. When Jung's ([1921] 1971) book Psychological Types was published, Briggs realized that Jung's typology was congruent

with her own effort but was much more complete. She then studied Jung's system thoroughly and taught it to her daughter, Isabel Briggs Myers. For over 20 years, Briggs and Myers used Jung's theory as the basis for an informal kind of "type watching," gaining ever greater respect for the power of Jung's theory to make behavior understandable and predictable (McReynolds, 1981).

World War II made it dramatically clear to Isabel Myers that human misunderstanding can threaten civilization. Nearer to home, she was struck by the unhappiness of persons working, for patriotic reasons, at jobs that "went against their grain." She decided to create an instrument that would bring Jung's theory into practical application (Myers, 1975). In 1942, using her knowledge gained from theory and from many years of observation, Myers began to consider specific questions for possible use in an instrument that would reliably indicate the Jungian type to which an individual belongs. Over the next 15 years, she developed a series of scales of increasing sophistication and tested them on increasingly larger samples of subjects, leading to the eventual development of the instrument that she christened the Myers-Briggs Type Indicator (also referred to as the MBTI, the Type Indicator, or simply, the Indicator). In 1962, the Educational Testing Service collected data on large samples of high school and college students and related MBTI scores to scores on certain better known personality instruments. This was in preparation for publication of Form

F, developed for research with the MBTI. W. Harold Grant and his students at Auburn University (Barberousse, 1965; Conary, 1965; Grant, 1965; Jordan, 1965) and later at Michigan State University (Eigenbrod, 1969; Grant & Eigenbrod, 1970; Grant & Foy, 1972) reported both theoretical and applied studies. In 1975, the Consulting Psychologists Press concluded that the accumulated research on the MBTI now justified distribution of the instrument for professional application. Accordingly, it published Form F in 1975 and Form G in 1977. In 1975, a research laboratory at the University of Florida was converted to a nonprofit Center for Applications of Psychological Type to provide education, research, and services to MBTI users.

Reliability of MBTI

Reliability data for the MBTI includes measures of internal consistency and test-retest reliabilities of the separate scales and type classifications. Myers (1975) discussed reliability as partly a function of the characteristics of populations. She hypothesized that adults and other populations likely to have achieved high levels of type development will be clearer about their preferences; therefore, samples from those groups will yield higher internal consistency reliabilities than samples from less developed groups. On the assumption that good judgement is the last of the functions to develop, Myers hypothesized that reliability values for the thinking/feeling (TF) scale would

be most sensitive to lack of full type development in the subjects.

While the consistencies of MBTI individual scales are important for comparing the Indicator to other personality instruments, the MBTI is primarily concerned with types, rather than with the scales themselves. The critical question is, how often on retest do individuals come out the same type? That is, how often do they fall on the same side on each of the four dichotomous preferences--as in the original testing? In nine samples for which retest data on type categories are available on samples tested from intervals of 5 weeks to 6 years, a range of from 31% to 61% of cases fell in the same type on retest. The highest percentage occurred in the sample with the longest time interval: 94 elementary school teachers retested after 6 years (Wright, 1967). From 70% to 88% of the cases in the samples had three or all four preferences in common on retest. From 10% to 22% had two preferences in common and from 2% to 7% had only one preference the same on retest. Only one individual in the composite sample of 1,444 persons changed on all four preferences.

Howes and Carskadon (1979) reported test-retest reliabilities on the MBTI for a sample of 117 psychology students, tested with the MBTI and the Sixteen Personality Factors Test (16 PF), Form A. Five weeks later, after a successful mood manipulation, students were retested. The MBTI scores changed somewhat less than the 16 PF scores. The

important aspect of the study, for our present purposes, is that the authors reported changes of preference as a function of the size of the original preference score. Subjects were classified as Low Preference (scores from 1 to 15), Moderate Preference (scores from 19 to 29), and High Preference (scores 31 and higher). The percentage changing type for each of the three levels was 32, 17, and 4 for EI; 25, 6, and 0 or SN; 29, 4, and 4 for TF; and 30, 12, and 6 for JP. The study was replicated by McCaulley, Macdaid, and Kainz (1985) in preparation for revision of the MBTI Manual, using a sample of nursing students. For the same three levels, the percentages changing were 37, 22, and 5 for EI; 38, 16, and 11 for SN; 31, 21, and 9 for TF; and 40, 18, and 10 for JP. In both samples, as would be expected, persons originally less confident of their preferences were more likely to change on retest.

In summary, when changes of type occur on retest, most changes affect only one preference, and those preferences with low original endorsement are the most likely to change.

Validity of MBTI

Construct validity studies are most relevant in establishing the validity of the MBTI since the Indicator was constructed specifically to implement a theory. Jung's theory of psychological types is concerned with the basic processes of perception and judgement and with the attitudes of extraversion and introversion. Since perception and/or judgment enters into most life activities, the behaviors and

attitudes that can be derived from the theory cover very broad areas in which validity studies can be carried out. The following discussion is by no means comprehensive, but it is designed to give the reader an understanding of the range of questions considered in construct validity studies on the MBTI.

Myers and Davis (1964) reported on a study of over 5,300 medical students tested by Myers in the 1950s and followed up 12 years later, after they had chosen their medical specialties. Choices were significantly in the directions predicted by the theory. A second follow-up study a decade later (McCaulley, 1977) showed that those physicians who had changed specialty had moved toward fields typical of their types. Consider, for example, the types designated ISFP and INFP--types that share three preferences and differ only in their preferred mode of perception (S or N). The ISFP's (in theory) prefer to focus attention on immediately present events, whereas INFP's prefer to attend to complex meanings and symbolic relationships. In this study, the ISFPs to a significant degree entered anesthesiology and avoided psychiatry; INFPs significantly chose psychiatry and avoided anesthesiology.

Carskadon (1979a) asked subjects designated as extraverts on the MBTI to give 3-minute talks before judges. Extraverts and introverts differed significantly, in that extraverts stood closer to the judges, had less silence

during their presentations, and remembered more of the judges' names after the experiment.

Howland (1971) compared ESTJs (a type often attracted to business) and INFPs (a type often attracted to psychology) on the Bieri modification of the Kelly Role Repertory Grid. ESTJs tended to use concrete, observable categories (male-female, blonde-brunette), while INFPs tended to use abstract categories (kind-cruel, sensitive-insensitive). Carlson (1980) administered the MBTI and an abbreviated version of Kelly's test to a sample of 34 adults. As predicted, iNtuitive types on the MBTI significantly more often than sensing types gave inferential constructs that went beyond the immediate data. Carlson (1980) also asked the same adults to imagine that they were beginning a correspondence with someone in a foreign country and to write a letter describing themselves. As predicted, sensing subjects significantly more often than iNtuitive subjects described themselves in terms of their physical appearance; iNtuitives significantly more often made direct or indirect references to characteristics of the imagined correspondent (that is, these subjects gave participation responses). In two of the studies reported by Carlson (1980), findings were confined to the SN preference; there were no significant differences attributable to extraversion-introversion or to thinking-feeling.

Carlson and Levy (1973) predicted and found differences as a function of MBTI type on two short-term memory tasks,

using Howard University students as subjects. Introverts with thinking (ITs) outperformed extraverts with feeling (EFs) on memory for digits; EFs outperformed ITs on memory for faces. After viewing geometric forms containing either numbers or names, IT and EFs again differed significantly; ITs tended to remember the forms with numbers, and EFs tended to remember the forms with names.

Carlson (1980) reported on a series of studies to support the construct validity of the MBTI. In one study, Carlson (1980) found that judges could significantly classify written descriptions of affected memories; eight of nine EF subjects and five of the six IT subjects were correctly identified in blind ex post facto predictions. In a further analysis of the same affective memories on a dimension of interpersonal closeness, extraverted subjects reported significantly more interpersonal memories of joy, excitement, and shame than did introverts. In a third analysis of the same data, Carlson focused on cognitive clarity versus vividness of feeling and found that feeling types, as predicted, reported memories more vividly. Carlson concluded that Jung's theory of psychological types is useful in understanding individual differences in the tasks of the psychology laboratory and in the more personal ways people represent their interpersonal worlds.

Caldwell (1965) predicted and found that INFP subjects would score higher than ESTP subjects on a measure of ideational fluency, that ESTPs would score higher than ISTJs

on a measure of trial-and-error learning, and that ISFJs would score higher than ENTPs on a measure of persistence. Stricker, Schiffman, and Ross (1965) were better able to predict college performance of students by considering all the 16 types than by regression equations with only the four preferences. And, in a natural setting, Doering (1972) reported on a scientific team of seven, whose members spontaneously formed working pairs that cut across disciplines. The pairs were INTP-INTP, INTP-INTJ, and ISTJ-ISTJ.

The ISTJ pair (sensing dominant) complained about the impracticality and tendency to overlook details of the other (intuitive) pairs. All three pairs complained about the seventh member, an ESFJ, an extravert with feelings as the dominant function. Although acknowledged to be a competent engineer, he was seen as overly preoccupied with people and with needing too much praise, and was pressured to leave. Other investigators (Barberousse, 1965; Johnson, 1976) have reported type differences in friendship patterns, and Schroeder (1979) has found difficulties between university roommates can be reduced when type is taken into account in roommate matching.

Personality Type and the Four Temperaments

Keirsey and Bates (1984), Hirsh and Kummerow (1989), and Wirths and Bowman-Kruhm (1992) studied personality type as a way to predict human behavior. More specifically, their research focused on a person's natural disposition or nature.

These natural dispositions expressed as two letter combinations are called "temperaments." Their research concluded four two-letter-combinations afford the widest base of accurate behavioral predictions. Temperament has been used to predict such things as how people teach, learn, lead others, entertain, manage money, and relate to others (Keirsey, 1987; Kroeger & Thuesen, 1988; Murphy & Meisgeier, 1989).

Sensing and iNtuitives

According to Keirsey and Bates (1984), the S-N difference is the first key to determining temperament. They conclude the differences in how people gather information from the world are the most basic of human differences. Without understanding of how someone gathers information, communication is extremely difficult. Is a cup half empty or half full? Sensors and iNtuitives each see it differently: iNtuitives, who see possibilities in everything, will be more optimistic about the glass's contents; Sensors, who focus on only what is actually there, not on what could be there, are less inclined to see the potential. Before either type begins to make a decision (Thinking or Feeling), and regardless of whether it's expressed internally or externally (Introvert or Extravert), the data must first be gathered (Kroeger & Thuesen, 1988).

The first letter of a temperament is either S or N, the information-gathering function. The second letter of a temperament is determined in part by the first letter.

If you are an iNtuitive, your preference for gathering data is abstract and conceptual. The second most important preference in reading your temperament is how you prefer to evaluate the data you have gathered: objectively (Thinking) or subjectively (Feeling). For iNtuitives, then, the two basic Temperament groups are NF and NT.

If you are a Sensor, gathering information is concrete and tactile. The next most important preference is not how you evaluate the data but what you do with them: Do you organize them (Judging) or continue to take them in, perhaps even seeking more (Perceiving). Thus, for Sensors, the two temperament groups are SJ and SP.

Four Temperaments

Accordingly, each of the sixteen types falls into one of these four temperaments:

NF		NT		SJ		SP	
ENFJ	INFJ	ENTJ	INTJ	ESTJ	ISTJ	ESFP	ISFP
ENFP	INFP	ENTP	INTP	ESFJ	ISFJ	ESTP	ISTP

There are still 16 distinct types. Temperaments, however, do provide researchers with useful tools and insights in understanding personality types and human behavior (Farris, 1990; Giovannoni, 1989; Lawrence, 1986; Wirths & Bowman-Kruhm, 1992).

Styles of the Four Temperaments

iNtuitive Feelers--The NFs look at the world and see possibilities (iNtuition), then translate those possibilities inter and intrapersonally (Feeling). They eat, sleep, think,

breathe, move, and love people. Representing about 12 percent of the population, they are the idealists of life and tend to serve causes that advance human interests: teaching, humanities, counseling, religion, and family medicine, among others (Keirsey & Bates, 1984; Myers & Myers, 1980).

iNtuitive Thinkers--The NTs gather data consisting largely of abstractions and possibilities (iNtuition), which they filter through their objective decision-making process (Thinking). Their driving force, in their quest for competence, is to theorize and intellectualize everything.

The NTs also represent about 12 percent of the U.S. population and learn by challenging any authority or source. They can be very critical of their own and others' shortcomings, and impatient when confronted with them (Keirsey & Bates, 1984; Kroeger & Thuesen, 1988).

Sensing Judgers--The SJs' information-gathering process is practical and realistic (Sensing), to which they prefer to give organization and structure (Judging). At about 38 percent of the U.S. population, they represent the largest single temperament group (Keirsey & Bates, 1984). As Judgers, their tendency is to organize-people, furniture, schedules, organizations, etc. Just as people are integral to the NF, and conceptualization integral to the NT, SJs' lives revolve around procedure (Kroeger & Thuesen, 1988).

Sensing Perceiving--The SPs' data collection is practical and realistic (Sensing), to which they bring spontaneity and flexibility (Perceiving). About 35 percent

of the U.S. public, they are attracted to careers that have immediate, tangible rewards: firefighting, emergency medicine, mechanics, farming, carpentry, and fields involving technical skills (Myers & Myers, 1980). The SPs' strengths include practicality, adept problem-solving skills, particularly at hands-on tasks and resourcefulness.

When doing research using type (MBTI) it is sometimes difficult to find representation of some of the 16 types (Macdaid, McCaulley, & Kainz, 1987). Temperaments have afforded the researcher a useful tool for gaining insights and understanding about human behavior (Giovannoni, 1989; Hirsh & Kummerow, 1989; Myers & Myers, 1980).

Personality Type and Career Choices

Substantial data exist on college majors and on persons actually in careers. Students reason they want a particular profession and then during preparation realize they are not suited for the profession. Conversely, students of a particular personality type or types might think they will enjoy peer helping and realize during the training it is not what they enjoy doing.

Type distributions of these student samples contribute to the construct validity of the MBTI, in so far as it can be shown that persons tend to choose fields of study and careers which, in theory, should attract their type. There is evidence (Conary, 1965; Lewis & Margerison, 1979; McCaulley, 1973; Myers, 1975) that business attracts practical and matter-of-fact ST mathematicians, in contrast, medical

careers appear to be attractive to the logical and ingenious NT types, especially INTJ and INTP (Conary, 1965; McCaulley, 1973, 1976; Myers, 1975); medical students of these types are attracted to medical research and teaching (McCaulley, 1978). Engineering tends to attract tough minded TJ types, with Sensing types more attracted to applied fields of civil and industrial engineering, and iNtuitive types more likely to go into chemical and nuclear engineering, fields with a greater demand for theory (McCaulley, 1976; Myers, 1975). Miller (1967) studied law students and found that the tough-minded TJs were significantly attracted to law and significantly less likely to drop out of law school. In contrast, the more people-centered and adaptable FPs were less attracted to law school than other types and significantly more than the expected number of them dropped out. (There have been informal reports that, since the 1960s, when Miller collected his data, more humanistic NF types have been entering law schools, as a way of changing society by entering the establishment; however, no hard data yet exist to test this possibility.)

It is felt, however, that the humanistic, enthusiastic, and insightful NFs are significantly attracted to the humanities, arts, counseling, psychology, psychiatry, and journalism (Conary, 1965; McCaulley, 1973, 1974). The sympathetic and friendly SF types, with their interest in practical action (S) for people (F), tend to be attracted to elementary school teaching (Cage, 1975; Carlyn, 1977;

McCaulley, 1973) and to bedside nursing, general practice, and patient care at professional and paraprofessional levels (McCaulley, 1977). These types are interested in giving practical help to people, but are relatively uninterested in helping others through psychological means.

The types who share a preference for practical details (S) and for systems and order (J) are attracted to the teaching of mathematics, especially in the lower grades (Story, 1973), and to dentistry, pharmacy, and medical technology (McCaulley, 1978). Judging types, who in theory should be quicker at decision-making than Perceptive types, are in the majority among business executives (Ohsawa, 1975), school principals (von Fange, 1961), police officers (Hanewicz, 1978), and in other fields where decisiveness is the order of the day.

The significant patterns of career choice described above are given as evidence that, in the uncontrolled experiment of life planning, people do move in directions predicted by Jung's theory. Would a personality temperament be more likely to chose peer counseling for an elective course? It is important to state, however, that all 16 types appear in every career on whom sizeable samples exist. In no career studied, however, are all types represented in equal proportions. However, with students selecting peer counseling a course oriented towards helping people, the researcher hypothsizes there will be more E's and F's in the population sample. Type research with junior high students

indicates helping students tend to be more E's and F's. The expected frequencies in the general population, based on type distributions in junior high school, are about 25 percent for introversion (Myers, 1975) and student "caregivers" are more likely to be F than T (Frederick, 1975; Hammer & Traeger, 1985).

Psychology is concerned with finding ways to understand the intricate complexity of behavior--both observable behavior and the dynamics behind the observable. Not surprising, iNtuitive types are attracted to psychology. Although peer helping is not a psychology course, it is very close to one. Conary (1965) found that all iNtuitive types except ENTJ were significantly overrepresented in Auburn freshman planning to major in psychology. University of Florida freshman planning to major in psychology included 65% N (McCaulley, 1973), while actual psychology majors were 73% N for males and 67% N for females (Gray, 1973). Psychology students at New York University were 79 percent N (Stein, 1972). In a composite of samples from the MBTI data bank at the Center for Applications of Psychological Type, McCaulley (1978) found that 76% of 393 male psychology students and 77% of 450 female psychology students preferred iNtuition; of 289 psychologists, 81% were N; and of 153 graduate students, interns, and practitioners in clinical psychology, 88% were N. Based on this research, the researcher hypothesizes that the peer helping students are more likely to be Ns than Ts.

Two studies of American Psychological Association members point up interesting differences in this diverse field. Perry (1975) studied 72 psychologists, whom he classified as experimental, clinical, and a buffer group. The experimental group was made up of 30 psychologists from the fields of comparative psychology, experimental psychology, experimental analysis of behavior, and physiological psychology. The clinical group was made up of members from the divisions of clinical psychology, counseling psychology, humanistic psychology, and psychotherapy. The buffer group included 17 members from the divisions of developmental, educational, personality, and social psychology. Of the total sample, 82% preferred iNtuition. The groups differed significantly in the proportion of iNtuitive types, with experimental 67%, clinical 96%, and the buffer groups 86% iNtuitive. While iNtuitive types were in the majority in all three groups, there were significantly more than the expected number of Sensing types in experimental psychology; in fact, all the thorough, fact-minded ISFJs and ISTJs were in the experimental group. The groups differed significantly on the TF preference, with clinical 75% F, experimental 67% T, and the buffer group 53% T. The clearest differences were between experimental and clinical, those in the experimental group were relatively more factual (S) and analytical (T), and those in the clinical group were relatively more insightful (N) and person-oriented (F). The population of the student peer

helpers would likely be more heterogenous in career interests than the population of psychologists. However, they might share share a common interest in human behavior and the predominant N characteristic.

The MBTI and Other Personality Measures

The MBTI Manual (Myers, 1975) provides correlations between MBTI preferences and grade point average, the Strong Vocational Interest Blank (SVIB), Allport-Vernon-Lindsey Study of Values (AVL), The Edwards Personal Preference Scheduel (PRI), faculty ratings of student characteristics, the Gray-Wheelwright Test (Jungian Type Survey), and the Scholastic Aptitude Test (SAT). McCaulley (1978) reports correlations between MBTI scales and the SVIB; Carlyn (1977) summarizes other correlations with the MBTI scales. The following comments are from theses sources unless otherwise noted.

The MBTI extraversion-introversion continuous scores typically show correlations from the .50s to the .70s with other measures of this construct: SVIB Occupational Introversion and MMPI Social Introversion (Stricker, Schiffman, & Ross, 1965). The MBTI extraversion tends to have low positive correlations with measures of adjustment, and MBTI introversion with measures of maladjustment. For example, MBTI extraversion shows significant positive correlations with Ego Strength on the 16 PF, Personal Integration on the OPI, and both Social Adjustment and Emotional Adjustment on the OAIS. Introversion is associated

with apprehension, Ergic Tension, Anxiety, and Neurotic Trend on the 16 PF. It my be that introverts, in the minority in American culture, are indeed more anxious; an alternative explanation is that introverts are more attuned to internal events and thus are more likely to report anxieties than extraverts are.

On occupational interest scales, MBTI extraversion is associated with social uplift, economics, business, sales, and the ministry; introversion is associated with interests in the sciences and the arts. Marshall (1971) found significant relationships between MBTI introversion and aspects of orientation toward privacy.

The SN scale has many significant correlations in the expected directions with career choices and with academic aptitude measures. Sensing is associated with interests in business, administration, production, and sales and with occupations requiring attention to detail, such as the biological sciences and technologies. iNtuition scores are positively correlated with interests in arts, psychology, the physical sciences, and the professions. iNtuition is positively correlated with academic aptitude scores in the grades (Cropley, 1965; May, 1971; McCaulley & Natter, 1974), in high school (Damico & Dalsheimer, 1974; McCaulley & Natter, 1974), in college (Bourg, 1979; Conary, 1965; McCaulley, 1973), and in medical school (McCaulley, 1977, 1978). The advantage of iNtuitive types is greatest, as would be suggested by theory, in symbolic measures, such as

verbal ability; SN differences tend not to be statistically significant on measures of motor skills or practical skills, such as computation or spelling (May, 1971).

When MBTI SN continuous scores are correlated with personality measures, Sensing is associated with practical outlook and a disposition to see learning as for practical use on the OPI, with economic interests on the AVL, and with shrewdness on the 16 PF. iNtuition is associated with intelligence, radicalism, dominance, imagination, independence, and creativity on the 16 PF, with theoretical and aesthetic interests on the Allport-Vernon-Lindsey Study of values (AVL), with intellect quality and creativity on the OAIS, and with the theoretical orientation, estheticism, complexity, autonomy, and thinking orientation on the OPI. Bush (1968) found that Extraversion and Sensing were associated with a measure of reality closeness and that Introversion and iNtuition were associated with reality distance. Evered (1973) described type differences in coping with a complex and changing future; iNtuition and Thinking were related to coping by changing to new and different strategies, while Sensing and Judging were associated with a tendency to increase activity in familiar areas. Finally, Cann (1979) reported that S was associated with dreams of known characters and that N was associated with archetypal dreams.

When the MBTI TF continuous scores are correlated with the scales mentioned by McCaulley (1978), Myers (1975), and

Carlyn (1977), thinking tends to be associated with theoretical orientation and skepticism of religious orthodoxy on the OPI and with masculine orientation on the OAIS and on Holland's Vocational Preference Inventory (Kainz, McCaulley, & Macdaid, 1983). Feeling is associated with being tender-minded on the 16 PF. On career measures, Thinking is associated with interests in production, law and politics, physical and biological science, mechanical interests, and medicine, dentistry, and related technologies; Feeling scores are associated with interests in the social services, the ministry, teaching, and counseling. On a questionnaire of preferences for counselor characteristics, thinking was associated with a preference for a behavioral orientation, and feeling was associated with a preference for humanistic characteristics (Carskadon, 1979b).

Continuous scores on the MBTI J scale are associated with ratings of responsibility and dependability, with measures of superego, control, and leadership on the 16 PF, and with vocational interests on the OAIS. The MBTI P scale is associated with needs for autonomy and change on the EPPS and with tolerance for complexity on the PRI.

Since the MBTI is concerned primarily with types, not scales, correlations often show a linkage of scales in theoretically understandable ways. For example, on the 16 PF leadership with -NTP, tender-mindedness with -NFP, and worldliness with -STJ. Knapp (1964) reported correlations of

preferences for realistic art with ES--, expressionistic art with IN--, and geometric art with --TJ.

The preceding description of research is by no means comprehensive, but it is designed to give the reader and understanding of the range of validity studies with the MBTI and to show that relationships found tend to be in the directions predicted from type theory. It is important also to note that relationships not expected to occur tend not to occur. For example, SN tends not to be related to outgoingness, nor is TF related to creativity or intellectual interests. Studies in other cultures (Levy & Ostrowski, 1983; Ohsawa, 1975) are beginning to make it possible to generalize beyond the United States. One further kind of validity, not yet in the literature, lies in the fact that leaders of training workshops designed to teach the MBTI routinely group participants by type, so that groups can see type differences will appear, despite the many protestations of recent personality literature that behavior cannot be predicted from personality instruments.

Through a relatively small proportion of the studies bearing on validity have been considered here (for other reviews see Carlyn, 1977; Carskadon, 1979; McCaulley, 1978; Myers (1975), the selection of data has been representative and offers considerable evidence for the construct validity of the MBTI--with respect both to the 16 types and to the preference scales that identify the types.

Limitations of the MBTI

The MBTI is concerned with differences in normal behavior. Although the theory suggests where difficulties may be found, the MBTI itself gives no information about defenses or emotional problems or, on the other hand, about high levels of creativity. One cannot now tell from the MBTI whether a given individual has good development of perception and judgment, or is at an earlier developmental stage, struggling with the deficits of the type rather than enjoying its assets. The MBTI is based on a self-report of the end result of environment influences, but it is not designed to identify the extent of these or how they came to produce the effects now reported.

The data of the Manual are more complete for males than for females. Scattered data exist comparing white and black samples (Levy, Murphey, & Carlson, 1972; McCaulley, 1978), and in most samples all 16 types appear in both black and white groups, with somewhat higher proportion of Sensing types among black subjects. Very few data are currently available on other minority groups. Because Jung's theory assumes that type differences are intrinsic to the human condition, it is important that research compare samples across cultures; this work is just beginning, but present results look promising.

No stratified random sample of MBTI types in the population exists, nor is such a sample likely to be collected in the foreseeable future. Data on 8th and 9th

grade students can be used as an estimate of the population. Such data exist but have not been brought together in a way that can give the MBTI user representative data for all parts of the country and for major social groups.

The MBTI was originally developed with adult samples and with high school students from middle-class schools. The reading level is difficult for poor readers and for below-average students younger than 8th grade, although, when items that they did not understand were omitted, children as young as the end of the 4th grade have answered reliably. For individual applications of the MBTI is best used with persons who have at least a 9th grade education, unless intelligence is superior.

There is no parallel form of the MBTI, and it is unlikely that any further researcher will have the time, dedication, and sophistication to develop one. As Myers' work made clear, it is not nearly so easy to identify valid type indicator questions as would appear on the surface.

Peer Helpers

Early History of Peer Helping

The idea of using students to help other students is nothing new. Young people have been helping others for centuries. The idea of using older students to help younger students was part of the frontier American school system. The practice was used extensively in America and Europe in early and mid-1800s (Hebeisen, 1973).

The actual practice varied, but most of the helping centered around monitoring, where one student might be responsible for "overseeing" 10 or more other students. This assistant teacher role was especially popular in the rural one-room school.

In the post WWII era, more national attention was given to professional preparation of school teachers. As the number of teachers rose the use of peer helpers seemed to decrease. The popular belief was it was unprofessional to use untrained students to assist in teaching. However, despite these new reservations, many teachers continued to recognize that young people could provide valuable assistance to their peers (Myrick & Folk, 1991).

Historically students have assisted teachers without any special training or simple training on the job (Lippitt, Eisman, & Lippitt, 1969). Youth assist their teachers with clerical tasks--scoring, recording, working with media equipment, answering telephones, running messages, and building displays and bulletin boards. Especially teachers that are popular with their students have little difficulty drafting students to help them with these or other roles.

The classroom environment of many schools can be very rigid. Students are expected to remain in their chairs and listen to the teachers lecture and explain lessons. Students work quietly on their lessons with little interaction with other students. Teachers are often evaluated by the school administration primarily on their ability to discipline, to

have strict order in the classroom, and to provide a formal learning structure. Cooperative learning is still an idea yet to be fully crystallized. Even though John Dewey's work advocated that students learned best by doing, too many teachers are unsure how to supervise projects or to lead discussions in which all students participate. The problem has been compounded as teacher-student ratios increased along with a growth in the general population.

Some parents and teachers are very protective of students, worrying that they are not ready to assume responsibility beyond just being students under the supervision of a teacher. But, as time passes, new demands on teachers brings new opportunities for students--more class participation, more leadership, and more individualized instruction. Teachers are expected not only to teach classes based on their professional areas of expertise, but they are being asked to teach the whole child, giving attention to personal and social growth as well as to academic achievement.

While the peer helper movement has moved along, drawing upon old and established student assistant roles, it has become apparent that young people are growing up in a faster paced world than did their parents and teachers. Technological changes upset traditions and has ushered in new ways of viewing the world. Mobility within communities, across the states and the nation, becomes more commonplace, as old-time family roots are pulled up and families

relocated. Urbanization brings new economic opportunities and new problems. Many family relationships are breaking down under the stress and the number of divorces has increased.

By the end of the 1960s there were new threats to the nation which also served to alienate many young people from adults. The Vietnam War, television, birth control pills, and the advent of a drug culture, tended to pit many adults against adolescents. A social structure was in upheaval as one public confrontation after another continued to intensify the problem.

The rapid changes which were taking place in our society and the communication gap which was widening between adults and young people presented a picture of confusion, conflict, and confrontation. The old ways of coping with problems and people were breaking down and the search for new ways was beginning. Stressful events of the times and overwhelming choices created an age of anxiety.

There simply were not enough professional caregivers to render assistance to those who were in personal turmoil. There were not enough professional facilitators to guide antagonists through constructive debates and patient exchanges. There were not enough psychiatrists, counselors, or social workers to provide vital services. It was about this time that self-help books and personal-growth groups became very popular. It was also about this time that the

drug culture found root in our society, alienating youth even more than before (Myrick, 1987).

Young people have been experimenting with alcohol and drugs longer than most people are willing to admit. Drug use among youth, however, is far more serious than it was decades ago. More powerful drugs are now available and there is a more pervasive network of drug dealers. Adolescents are also beginning to use alcohol and drugs at an earlier age than in past years. Because drug use has had such wide-ranging effects on our society, compounding other social and personal problems, adults began asking for help--asking young people to join with them in fighting this national problem (Community Council on Alcohol and Drug Abuse, 1992).

Professional counseling groups generally resisted the idea of using paraprofessionals in situations which appeared to need the attention of certified professional counselors. However, the need for helpers encouraged agencies to use volunteers or to employ minimally prepared workers. In addition, young people were so suspicious and mistrusting of adults ("Don't talk with anyone over. . . .") that many professional counselors were shut out. Their assistance was unwanted and, too many times, rejected (Thomas & Tindall, 1990).

Adult helpers, despite their titles and willingness to provide assistance, were seen as opinionated, judgmental, dogmatic, unsympathetic, not understanding, and disrespectful toward young people. The battle lines seemed to be drawn.

Finally, it was recognized that adolescents tended to talk with their peers about problems before they would talk with adults, including parents, teachers, counselors, or religious leaders. It was obvious that groups of young people, for better or for worse, were banding together. Many were determined to resist adult advise and guidance. They believed that only those of their own age group could be trusted and could understand their world. Young people just seem to feel more comfortable and trust other young people more than adults (Naginey & Swisher, 1990).

Not all adolescents, of course, were so alienated. Yet, it was about this time that peer counseling was introduced. Peer counselors were to be an extension of professional counselors. They were to be involved in working with their peer groups by talking through various problems and helping to build bridges between the adolescents with problems and the adult helpers (Myrick & Folk, 1991).

The term "peer counseling" was first made popular in a few large cities, such as Miami, New York, Houston, San Francisco, and others. Affective education was popular about this time and for the most part, this approach was used to help prepare teenagers to work with other teenagers. Being tuned into self, being sensitive to others, and reaching out to talk with others were the foundation of most programs (Tindall & Gray, 1985).

Many of these early peer helping programs were very successful in reaching young people who needed help. Four of

the most successful programs in public high schools which received national attention were those started by Barbara Varenhorst in Palo Alto, California (Hamburg & Varenhorst, 1972); Don and Mimi Samuels in Miami, Florida (1983); H. Dean Gray and Judy Tindell in St. Louis, Missouri (1985); and Robert Myrick and Tom Erney in Gainesville, Florida (1978, 1979). There were others, some of which concentrated on leadership training and general social and academic projects (Kehayan, 1990). Tutoring, for example, continued to gain support.

However, some peer counseling programs experienced problems. First, many adults, including professional educators and counselors, continued to be skeptical about the responsibilities which "counseling" implied and they had a difficult time imagining teenagers as counselors. Some parents said, "I don't want another kid counseling my kid," as if to imply that the working relationship would be either unproductive or possibly hurtful.

Professional counselors, including many school counselors, were also worried about peers counseling peers. One counselor said, "I went to graduate school to get a degree in counseling. Now you're saying that these kids are going to do my job, just because they are younger than I am?" In truth, many of the first peer counseling programs offered minimal preparation, if at all. In addition, many of these same professionals who had been trained in advanced theories and techniques associated with counseling psychology could

not visualize how peer counselors might work. Peer counselors could make a wrong diagnosis or interpretation, or perhaps strip away the tenuous personal defense of a person and precipitate a crisis. The solution might be worse than the problem, perhaps creating more problems (Podsen, 1981).

Because the first peer counseling programs concentrated on reaching students who were experimenting with drugs, some students saw peer counselors as "little narcs." In many cases, peer counselors were only selected from those students who appeared to have everything in order in their own lives--good grades, good citizenship, and so on. It was erroneous to think that they would be able to provide assistance to anyone their own age or younger, just because they themselves were part of the peer group. Many were rejected by their peers, who said, "I don't need a counselor. And, who do you think you are, passing yourself off as one?"

Despite the obvious advantage of peer counselors, many schools have delayed implementing organized classes or training programs. The American School Counselors Association (ASCA) had taken a positive stand, recommending that peer counseling be a part of school guidance services. In 1984 the position statement by the association was modified and it included a name change from peer counselors to peer facilitators.

Readiness and Receptiveness

Readiness for Learning

Psychologists and educators have developed and advanced theories of learning and school readiness. These theories can be helpful in understanding which peer helpers might be receptive to training and their possible readiness to use that training in peer helping roles. Most school readiness theories are based on divergent ideologies: commulative learning, observational learning, and growth readiness models. Included in the growth readiness models is Piaget's theory of cognitive development (Ogletree, 1988).

Briefly, Piaget's theory of cognitive development emphasizes psychobiological together with environmental factors to explain how children acquire knowledge. He arrived at this ordered series of cognitive stages (sensorimotor, preoperational, concrete and formal operational) via clinical-diagnosis of children's behavior. Each stage extends the preceding cognitive stage and through maturation and environmental intervention the child reconstructs a new cognition level which surpasses the earlier stage. Through the process of what Piaget calls assimilation, which consists of modifying and filtering information and experiences and accommodation, which consists of adjusting his internal patterns of understanding to fit a new reality, the child reorganizes his or her current insights so as to accommodate the new information (Ogletree, 1988).

The stage most secondary school peer helpers would be expected to have reached would be the formal operational stage (12-15 years and over). The mental characteristics of this major and final developmental stage include:

1. Can think under voluntary control, i.e., it is operational.
2. Can think relatively free of physical and emotional life, more objective.
3. Can manipulate two or more conceptual variables.
4. Can think in more flexible and symbolic modes.
5. Can predictive problem solving components without concrete props.
6. Can manipulate symbols and concepts without outer perceptual props.
7. Can solve hypothetical and verbal problems.

It is during adolescence that these cognitive structures fully develop, according to Piaget. To perform these mental operations requires energy, mental energy. A person must be motivated to realize their mental cognitive potential. Therefore, peer helpers need to be motivated to achieve their potential during and after peer helping training.

Cummulative learning theory emphasizes the importance of individual experience: An individual performs some behavior and experiences the consequences that follow. Moore (1987) developed a holistic index for school readiness based on this theory. Their "Integrated Maturity Index" (IMF) takes into account (1) chronological age, accumulation of experiences,

(2) cognitive ability, understanding of experiences, (3) acquired knowledge and the use of language, (4) physical development and anthropometric maturity, (5) perceptual discrimination, and (6) a readiness to work together with other related factors. These factors were taken into account in developing an instrument for measurement of receptiveness for peer helping training and readiness to use the training for projects (Bennett, 1989).

A large proportion of human learning occurs, not through classical conditioning or as a result of reinforcement or punishment, but through observation. Two psychologists whose writings and experiments repeatedly emphasized this fact are Albert Bandura and Richard H. Walters. In their classic book, Social Learning and Personality Development (1963), Bandura and Walters argued that traditional learning theory was grossly incomplete because it neglected the role of observational learning. Traditional learning theory emphasizes the importance of experience, and yet a good deal of learning occurs through vicarious rather than personal experience. We observe the behavior of others, observe the consequences, and later we may imitate their behavior (Bandura, 1963; Striefel, 1981).

Bandura's theory (1977, 1978) is further interested in how people develop different personalities. Why are some people extroverted and others introverted, some peaceful and others aggressive, some industrious and others lazy? Bandura suggests that while personality differences have a hereditary

basis, most are due to an individual's learning experiences. The theory proposes several processes that can never be observed in an individual's behavior. The motivational and incentive processes proposed by Bandura (1981) may be linked to the unique personality of the individual. Attentional, retentional, and motor reproductive processes all are necessary for an individual to acquire the capability to perform some new behavior, but this capability will not be reflected in the learner's behavior without appropriate incentive. There may be a connection between a person's personality and the motivation and incentive to actually produce the new behavior after learning. There may be the same connection between peer helpers' personalities and their motivation and incentive to perform new behaviors after training.

Receptiveness for Training

How does one know when one is receptive to training? Wheldall, Merrett, & Glynn (1986) summarized five general principles offering a theoretical basis for understanding "positive training" and analyzing problems.

1. Training is concerned with the observable. Trainers/teachers, therefore, might adopt a behavioral approach, concerning themselves with what trainees do (i.e., their behavior) rather than speculating about unconscious motives or the process underlying their behavior. We know what individuals can or will do through observing their behaviors.

2. All training behavior is learned. The sorts of behaviors a trainer is likely to be concerned with are learned as a result of interactions with home, classroom and school environments. Central to this approach is the view that intellectual and social skills, as well as inappropriate or unacceptable behaviors, are all learned.

3. Learning involves change in behavior. The way teachers/trainers know that learning has taken place is by observing change in behavior.

4. Behavioral changes as a result of its consequences. Individuals learn on the basis of tending to repeat behaviors that are followed by consequences which they find rewarding or desirable.

5. Altering the context can change behavior. In any situation some behaviors are more appropriate than others, and people learn which situations are appropriate for which behavior.

If the only way teachers/trainers really know what an individuals can or will do is through observing their behaviors (including their verbal behaviors), then it follows that careful definition and observation of behaviors will be central to an assessment of training readiness. Being concerned with observable behavior, however, does not mean that trainees beliefs, feelings, and personality are to be ignored. Rather, these can be understood best in the context of the observable behaviors which accompany them (Striefel, 1981).

While developing an instrument to measure a peer helper's receptiveness to training and readiness to use the training in peer helping projects, observable behaviors were the primary consideration.

Training Outcomes and Effectiveness

Outcomes of Training

What is the goal of training? Increased knowledge is usually considered a primary outcome. But, is increased knowledge all we want to provide trainees? Increased skills in working with younger students is often the desired outcome of training peer helpers (Kehayan, 1990).

The acquisition of skills usually requires a plan of sequenced training experiences. Trainees can develop skills through watching demonstrations, role playing, coaching, completing checklists, and receiving structured feedback (Bandura, 1981). Even if one desired outcome of training is to change the attitudes of trainees, a planned sequential training program focusing on skill development is typically a primary consideration.

Generally, the training methods in the field have been researched. However, there may be a need to do more research on peer helper effectiveness and readiness to use the training (D. deRosenroll, personal communication, January 9, 1992). Three meta-analyses of research on teacher and student training in regular education provide some information about training effectiveness and readiness to use the training knowledge. Some important characteristics of

the training are the design, sequence, content, learning strategies used in training (Bennett, 1989).

Reasearch on traditional training workshops of one session are seen as generally ineffective (Sparks & Bruder, 1987). It is usually more effective to space out training events in four to six or more 3-hour workshops over several weeks, with follow up sessions to trouble-shoot problems which may arise. This allows trainees an opportunity to try and refine new information (Sparks & Bruder, 1987). The training of the peer helpers in this study took place over the first semester of the school year (5 months) and was ongoing during the time the students are working on their projects.

Wade (1981) used a meta-analysis to study learning variables across 91 studies and 715 data sets. The variables which were not significant were size of group, scheduling, location, and duration of training. Incentives such as earning high school or college credit seemed significant in training. The most effective instructional techniques were combinations of observation, micro-teaching, video-audio feedback, and practice. Grouping types of instruction in various ways were all effective: lecture, discussion, modeling, practice, and coaching; lecture, modeling, practice, and coaching; and lecture, discussion, modeling, video-audio feedback, and coaching (Wade, 1981).

High school credit in peer counseling in the State of Florida is given to the peer helpers enrolled in the elective

course. The course employs all the instructional techniques mentioned as effective training methods.

Conclusions from a Showers, Joyce, and Bennett (1987) study specify other interesting findings. The training design is very important for successful training and conceptual flexibility. The trainees' ability to adapt and apply information has a significant impact on the success of training. The self-concept of the trainees also has an influence on training effectiveness (Showers, Joyce, & Bennett, 1987).

Learning Strategies

There is a theoretical basis for the use of adolescent learning strategies (Knowles, 1986). General learning theories, more than children's learning theories, apply to students (15-18 year old) in a secondary peer helper program. There are nine crucial assumptions that differentiate adolescents from young children as learners:

1. The self-concept moves from dependency to self-direction.

2. The child accumulates a growing reservoir of experience that becomes an increasing resource for learning.

3. The readiness to learn becomes oriented increasingly to the developmental tasks of his or her social roles.

4. The time perspective changes from one of postponed application of knowledge to immediacy of application. Accordingly, his or her orientation toward learning shifts form subject-centeredness to problem-centeredness.

5. Since adolescents come to a training effort with varied previous experiences, the trainer must be able to apply a variety of educational approaches to meet the unique needs and cognitive styles of trainees.

6. The use of a variety of instructional methods is important if training is to be effective. It is suggested that at least three different techniques be used within a given training session for optimal learning to occur.

7. Immediate application of material to a current situation or specific example can establish meaningfulness and recall among trainees.

8. Learning will be facilitated if materials and training are designed and implemented in response to assessed needs, interests, and strengths of the trainees.

9. Learning will be facilitated if the trainer recognizes and utilizes the knowledge and experience of the adult in the training session.

Training methods need to exemplify learning strategies. Some of these strategies are checklist training, feedback, micro-teaching, mentoring, coaching, demonstration, modeling, observation, practice, and video-audio feedback. The high school peer helpers, in this study, received training sessions that followed these learning strategies.

Readiness for Projects

What behaviors are recognized among educators as being important in analyzing receptiveness to learn and readiness to use the learned behaviors? Although educators do not

always define behaviors in the same way, their expectations of students seem to be fairly universal (Bowman, 1987; Carter & Sugai, 1989; Conoley & Conoley, 1988; Fuchs, 1990; Graden, 1985; Hayek, 1987; Idol, 1988; Ossler, 1990; Welch, 1990).

Expectations may be either cognitive or behavioral. Cognitive expectations consist of classroom performance, activities, and timelines related to academic learning functions. The following are some examples of cognitive expectations: (a) academic quality or quantity, (b) accuracy, (c) rate of work, (d) amount of comprehension or retention, (e) amount of teacher attention or feedback given, (f) ability to organize thoughts or materials.

Behavioral expectations consist of conduct, activities, or mannerisms displayed by a student that are observable, measurable, and required in a given situation. Behavioral expectations are important because research indicates that a student's classroom behavior may have more to do with a successful school experience than with the student's academic skills. If a student is not able to meet certain behavioral expectations, there may be an impact on the overall educational success. The following are some examples of behavioral expectations: (a) attentiveness, (b) on-task behavior, (c) time management, (d) preparedness, (e) appropriate use of humor, (f) knowing when to ask questions, (g) knowing when to talk to others, (h) knowing when to do classroom activities, (i) knowing how to address the teacher,

and (j) knowing what to do when problems arise (Englert & Sugai, 1983; Ossler, 1990).

The behavioral expectations of the peer helpers in this study fell into the behavioral and academic categories mentioned in the review of the literature. These behaviors are related to the peer helper's receptiveness to training and the readiness to use that training in projects. The behavioral expectations to be investigated are based on primary learning theories and peer helper trainers' behavioral expectations of training. Moreover, we are interested in how are these behaviors are related to personality temperament.

Peer Helper Rating Scales

The researcher developed rating scales for the evaluation of peer helper receptiveness to training and readiness for projects. These two areas in the peer helping field have not, as yet, been examined through careful investigation.

Peer Helper Readiness

When the researcher first went to the literature on competent or effective counselors. Since the peer helper is an extension of the counseling department in most school systems this seemed to be a logical way to peruse this concept of readiness.

Peer Helper Personality and Receptiveness for Training

This section of the literature review offers opinions and cites the research of several professionals in the

counseling field concerning the relationship between counselor effectiveness and personality. The paraprofessional position of peer helpers in counseling makes this research applicable to this study.

Counselor educators are sensitive to the personality characteristics that entry-level graduate students should possess in order to maximize counseling effectiveness (Walton, 1974). Polmantier (1970) suggested that if the counselor's personality influences the direction, course, and outcome of the counseling interaction, it would be expeditious to speculate about the kinds of personality traits that are likely to facilitate counseling and those that are not.

In summary, a review of the literature suggests that the belief that counselor personality characteristics are instrumental determinants of counselor effectiveness is extensive (Bonk & Jansen, 1974; Booth, 1974; Donnan, Harlan, & Thompson, 1969; Heikkinen & Wegner, 1973; Palisi & Ruzicka, 1977; Biasco & Redfering, 1980; DeCsipkes, 1974; Tinsley, 1978, 1993; Truax, 1971). Furthermore, many of the major professional organizations endorse the need to identify counselor trainee personal characteristics prior to trainee selection (Association for Counselor Education and Supervision, 1974; American Psychological Association, 1954; American Personnel and Guidance Association, 1965; American School Counselor Association, 1965).

Walton (1974) investigated the relationship between personal preferences of counselor trainees in a regular counselor education program and the sociometric choices of their peers. The question he addressed was, "Is there a relationship between certain personal preferences of counselor trainees and how their peers rate them in terms of desirability of counselors?" (p. 250) The Edwards Personal Preference Schedule (EPPS) was administered to 54 master's level students. At the conclusion of a seminar course, a sociogram was administered. Results suggested that those most frequently chosen demonstrated manifest needs for dominance, change, succorance, order, nuturance, and achievement. This investigation identified several personal preferences which were seemingly desirable for peer counseling.

In a earlier study of counselors using the EPPS, Benoit and Demos (1965) found that the personality instrument differentiated the above average counselor trainees from the below average, as rated by their supervisors. Of the 30 students in the study, the most effective trainees had a greater need for nuturance and affiliation. In contrast, the least effective trainees were more autonomous and aggressive.

Jackson and Thompson (1971), using the 16 Personality Factor Questionnaire (16PF), found that those counselor trainees rated most effective by their supervisors scored two standard deviations higher on several traits identified with effective counselors. These traits included warmth,

venturesomeness, realism, trust, analytical tendencies, and relaxation. In addition, the effective counselor trainees were perceived as possessing more positive attitudes towards self, towards most clients, and towards counseling in general.

Donnan, Harlan, and Thompson (1969) conducted another study involving the 16 PF. Using 22 counselors and 330 corresponding college student counselees, findings indicated that 16 PF scores were effective in discriminating between counselors rated as high or low on each of the following variables: (a) unconditional positive regard, (b) empathic understanding, (c) self-congruence, and (d) trust. More specifically, counselors who scored high on the 16 PF in the area of outgoing, warm-hearted, and easy going were perceived as offering a higher degree of unconditional regard. Counselors who scored high in maturity, calmness, and sensitivity scored higher in congruency. Finally, those who scored high in venturesomeness and spontaneity also scored higher in trustworthiness.

Attitudes of 34 female counselor trainees who had teaching experience were investigated by DiMattia and Zimmer (1972). Those counselor trainees rated high in counseling skills scored higher in sociability, emotional stability, objectivity, and restraint, as measured by the Minnesota Teacher Attitude Inventory.

In an investigation of the relationship between dogmatism and counselor trainee effectiveness, Mezzano (1969)

collected data of 37 graduate students. Using the Rokeach Dogmatism Scale and supervisor ratings, he found that the more effective counselor trainees were lower in dogmatism scores, more genuine, accepting, and understanding than the less effective trainees. Implications from this study suggest a need either to select open-minded candidates or to emphasize the development of open-mindedness in counselor education programs.

Using the Minnesota Multiphasic Personality Inventory, Heikkinen and Wegner (1973) found that counselors perceived as effective were more calm and efficient than ineffectively perceived counselors. Moreover, counselors in general were more extroverted, defensive, calm and efficient, and honest than other professional groups.

Loesch, Crane, and Rucker (1978) published a comprehensive report on the relationship between personality characteristics and counselor trainee effectiveness. Their analogy to the dilemma of this relationship was as follows. The process of attempting to relate counselor trainee personality traits to effectiveness is similar to assembling a puzzle. The criterion of counseling effectiveness used is the picture which the assembled puzzle pieces are to portray, and the personality characteristics are the puzzle pieces. The task, then, is to determine how the pieces fit together. In attempting to solve the puzzle, they reported on investigations involving several personal characteristics, including self-disclosure, dogmatism, locus of control, and

Machiavellianism. Within the context of these areas, they reported that the ability to self-disclosure is a desirable counselor trainee characteristic (Graff & McLean, 1970), that judges rated less dogmatic counselors as being more effective than counselors who were more closed-minded (Jenkins, & Kelz, 1973), that an internal locus of control seems more appropriate for counselors trainees than an external locus of control, and that the degree of Machiavellianism has been found to be inversely related to the favorableness of other types of interpersonal assessments made about individuals (Bowman & Giesen, 1982).

The relationship between counselor effectiveness and personality, then, has been investigated extensively. The preceding section of this literature included the perceptions of several professionals regarding the focus on personality characteristics for counselor selection and subsequent counselor effectiveness. In addition, specific research studies involving the relationship between counselor effectiveness and personality were reported.

When reviewing the literature as it relates to peer helpers the research is less extensive. Much of the literature relates to the training given peer helpers. Campbell (1983) suggests that training is the most critical component of peer helping programs. One of the areas this research hopes to explore is the relationship between peer helpers receptiveness to peer helper training and personality type.

The Training of Peer Helpers

There are many things which trained peer helpers can do. But, it might be helpful to first think of peers working in one of the four basic roles: student assistants, tutors, special friends, or small group leaders (Myrick & Bowman, 1981).

The training for the student assistants might entail little formal training: scoring tests, attendance in class, helping with bulletin boards, etc. These are tasks students have been helping teachers with for over a century.

The other three roles, tutors, special friends, and small group leaders, might require more specialized training to be effective. Each program, and subsequently, the training approach, is defined by its goals and objectives. These may differ from one program to another, depending on the student population, the extent of training, and the nature of the projects. The four general goals of a peer facilitator program are:

1. To prepare a selected group of students to be peer facilitators who will:

   a. Demonstrate specific interpersonal and communication skills which can be used to assist others in decision-making and problem-solving;

   b. Participate in one or more of the four basic helper roles: student assistant, tutor, special friend, and small group leader;

c. Organize and implement a helping project which assists others, such as a prevention education intervention;

d. Be able to assess their own abilities and progress in helping others; and

e. Know how to make appropriate referrals to responsible adults.

2. To provide a organized structure which enables the students to augment and enhance the guidance and educational services which are available to all students.

3. To target at-risk students or targeted student populations who need special assistance and who would benefit from working with a peer helper.

4. To provide an academic and personal growth experience for students who are preparing to be peer facilitators.

The state of Florida has approved high school elective courses entitled Peer Counseling I, II (first year), and III and IV (second year), with a half credit for each semester (18 weeks) of work completed. Developing an increased awareness of self and the interpersonal skills of listening and responding are the core of peer helping training.

The actual training programs are adapted to meet the needs of individual teacher/trainers and the school curriculum. The basic approachers fall into six categories; the elective class approach, the summer course approach, the teacher-advisor group approach, the retreat-workshop

approach, the school club approach, and the focused-project approach.

Peer Helper Participation

Who should be the peer helpers? Almost any student can learn to be facilitative, to facilitate other students. However, selection will be influenced depending on the goals of the program, the projects planned, and the personal interests of the trainer. Since the peer helping training can be an intervention treatment for students at risk of dropping out of school or being disruptive in school, care must be taken to define what is expected of the students. All students can benefit from the training, but not all students can be used effectively in all peer helping roles. For instance, if the peer helpers are to leave the school campus in their own cars and travel to surrounding schools to deliver their services, students exhibiting responsibility and dependability are required.

Training Activities

There are numerous training activities that have been developed by professionals in the field of counseling and psychotherapy. Myrick and Folk (1991) in Peervention, Sturkie and Phillips (1991) in The Peer Counseling Training Course, and Carol Painter (1989) in Friends Helping Friends: A Manual for Peer Counselors, are just three of the more than a dozen trainer's manuals filled with training activities.

One common theme in most of the training programs for peer helpers are activities to increase group cohesiveness

and establish good relationship among group members. These training activities involve icebreakers, trust walks, self-esteem builders such as strength bombardment activities, self-disclosure activities, etc. to help the students know themselves and others better. Training activities to help participants increase self-esteem, awareness of themselves and others, leadership skills, and become more aware of the importance of responsible behavior. Much of the training in successful programs involves the students in role playing activities. Students learning by doing, acting out the roles they are expected to master. For instance, when learning to use high facilitative responses students might break into triads, two students might model the facilitative responses while the third monitors their responses. Feedback is then given to the respondents and they change places.

The student behaviors that are exhibited during the role playing activities were of particular concern when developing the Peer Helping Rating Scale. The successful responses and role playing activities are considered important observational references for determining peer helper readiness to perform projects.

CHAPTER 3
METHODOLOGY

Personality temperament as related to peer helper choice, student responsiveness to training, and peer helper readiness to help others was investigated in this study. Four different pairs of personality types or temperaments, as measured by the Myers-Briggs Type Indicator (MBTI), were studied in terms of student willingness to be involved in training and their readiness to help others following training. The major personality types included introversion/extraversion, sensing/intuition, thinking/feeling, judging/perceiving. Accordingly, each of the 16 types falls into one of these four temperaments: iNtuitive feeling, iNtuitive thinking, sensing judging, and sensing perceiving. In this chapter the participants, research design, experimental variables, description of study, research hypotheses and procedures are described.

Population and Sample

The population for this study consisted of 10th, 11th, and 12th grade students enrolled at Gainesville High School, Gainesville, Florida, who were selected to take part in the Peer Helper Training Program. The Peer Helper Training Program was started at the high school in 1988. During the years of 1988-1993 about 500 students have been prepared as peer helpers.

The sample included those students who completed peer helping trainer programs during the 1990-1991, 1991-1992, and 1992-1993 academic school years (N = 245). Further information about the sample is reported in the first four tables. The total number of peer helpers for each school year is described in Table 1, frequency of the four temperament types are described in Table 2, gender frequency is described in Table 3, and ethnic frequency is described in Table 4. This sample was considered representative of peer helpers who were trained during other school years. The high school is located in Alachua County, Florida.

Table 1
Peer Helper Population by School Year

Group		N	Percent
1	1990-1991 school year	94	38.4
2	1992-1993 school year	92	37.6
3	1991-1992 school year	23	9.4
4	1991-1992 school year	36	14.7

Alachua County is located in north central Florida. Approximately 45 percent of the workers in the county are employed by local, state, and federal governments. The University of Florida and the health-related services and hospitals are the largest single employers.

Alachua County, because of its large college student population, has the lowest median age--28.3 years--among the

state's 67 counties. Nearly half of Alachua County's population over 25 have had at least 1 year of college, ranking the county first in the state for level of education per-capita. Approximately 30% of the population have had 4 or more years of college, about twice the state average. The population of Alachua County in 1985 was 161,272. By 1991, the population was over 185,000, with projections of over 200,000 by mid-1990.

Table 2
Peer Helpers by Temperament Type

Temperament Type	N	Percent
NF	114	46.5
NT	33	13.5
SJ	43	17.6
SP	55	22.4
Total N =	245	

Table 3
Peer Helpers by Gender

Sex	N	Percent
Male	65	26.5
Female	180	73.5

In 1992, there were approximately 26,000 students attending 35 public schools in Alachua County. The public

school system has three city high schools and three rural high schools. Of those, 61.8% were white and 34.2% were black. Children of Hispanic or Asian origin comprised about 2% each. The public school staff numbers over 1,500 with a student-teacher ratio in secondary schools of 1-20 (Almanac '92, University of Florida Bureau of Economic and Business Research).

Table 4
Peer Helpers by Ethnicity

Ethnicity	N	Percent
White	166	67.8
African American	43	17.6
Hispanic	30	12.2
Asian	6	2.4

Sophomore, junior, and senior students were selected for the Gainesville High peer helping program after they applied for the program through the school's guidance department. To be eligible for consideration students must have a minimum grade point average of C or better. Four letters of recommendation, including three from teachers, and a comprehensive personal essay must also be filed before registration. Applicants also participated in group and personal interviews before final selection took place. Generally, there were over 200 applications for about 100 openings.

Selected students were generally perceived by the school faculty to be caring and above average academically. The peer helping course is a 1 semester elective for 1/2 credit. However, almost all students take it for 2 semesters and are in class for the school year.

The MBTI was administered to the peer helpers during the latter part of the first semester. Students were instructed there are no preferred types. Type variations are used to help illustrate and understand differences between people. There is generally much interest and excitement when discussing personality type, especially when students begin to understand differences between themselves, family, friends, and significant others.

Hypotheses

There were nine null-hypotheses tested in this study:

H1: There will be no significant difference in personality temperament, as measured by Myers-Briggs Personality Type, between students in the peer helping program and students in the general population.

H2: There will be no significant difference in peer helper receptiveness for training, as measured by a Peer Helper Rating Scale, between Sensing (S) and iNtuitive (N) types, as measured by the Myers-Briggs Type Indicator.

H3: There will be no significant difference in peer helper readiness to help others between Sensing (S) and iNtuitive types (N).

H4: There will be no significant difference in peer helper receptiveness for training as a function of personality temperament.

H5: There will be no significant difference in peer helper readiness to help others as a function of personality temperament.

H6: There will be no significant interaction effect of gender and personality temperament of the peer helpers on their receptiveness for training.

H7: There will be no significant interaction effect of gender and personality temperament of the peer helpers on their readiness to help others.

H8: There will be no significant interaction effect of the ethnicity and personality temperament of the peer helpers on their receptiveness for training.

H9: There will be no significant interaction effect of the ethnicity and personality temperament of the peer helpers on their readiness to help others.

Research Overview

A research procedure using a Chi-square test and a single factor analysis of variance and a two-factor analysis of variance (Shavelson, 1988; Isaac & Michael, 1981) was used to analyze the data. The first hypothesis was tested using a Chi-square test to determine whether the observed frequencies differed significantly from the expected frequencies. The test is called a goodness-of-fit test because it tests how closely observed frequencies from a sample fit theoretically

expected frequencies based on a null hypothesis (Shavelson, 1988). The goodness-of-fit tests are frequently used by behavioral researchers interested in counting the number of subjects falling into particular categories. The Chi-square statistics were used to examine the difference between personality temperament of the students in the Peer Helper Training Program and personality temperament of students in the general population.

The data for the personality temperament of the students in the general population came from the MBTI Data Bank of the Center for Applications of Psychological Type, from published research, and from the research contributed by MBTI users (Hummel, 1981; McCaulley, Mcdaid, & Kainz, 1985; Sweet, 1981; Tillman, 1976).

The second and third hypotheses used a single factor analysis of variance (ANOVA) to test if significant differences at the .05 level existed between Sensing and iNtuitive personality types regarding receptiveness to peer helper training and peer helper readiness to help others. In Hypotheses 4 and 5, a single factor ANOVA was used to test if significant differences at the .05 level existed based on personality temperament in regard to peer helpers' receptiveness to training and readiness to help others.

Hypotheses 6, 7, 8, and 9 used a two-factor ANOVA to help determine whether the null hypothesis would be rejected. In Hypothesis 6, a two-factor ANOVA was used to test for significant differences at the .05 level based on peer helper

gender and personality temperament and their receptiveness for training. In Hypothesis 7, a two-factor ANOVA was used to test for significant differences based on peer helper gender and personality temperment and their readiness to help others. In Hypothesis 8, a two-factor ANOVA was used to test for significant differences at the .05 level based on peer helper ethnicity and personality temperament, their receptiveness for training, and readiness to help others. In Hypothesis 9, a two-factor ANOVA was used to determine whether significant differences at the .05 level existed based on peer helper ethnicity and personality temperament and their readiness to help others.

Instruments

Two criterion instruments were used in the study, one to determine personality temperament and the other to estimate (a) receptiveness to training and (b) readiness to help others following training. The Myers-Briggs Type Indicator (MBTI) was used to measure personality temperament. A peer helper rating scale with a Likert-type assessment was developed by the researcher to assess receptiveness to training and readiness to help others.

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator is an untimed, 126-item inventory that yields four dichotomous scores indicating respondent preferences for different activities. The four preferences are (a) extraversion versus introversion (E/I) --social as opposed to solitary settings are preferred;

(b) sensing versus iNtuitive (S/N)--immediate realities as opposed to future, hypothetical possibilities guide perceptions about alternatives; (c) thinking versus feeling (T/F)--impersonal logic as opposed to personal subjectivity influences judgements; and (d) judging versus perceiving (J/P)--plans, adherence, and decisiveness as opposed to openness, flexibility, and tentativeness. The instrument does not indicate a preferred personality type or evidence of pathology.

Respondents used a standard answer form to first provide demographic data such as age, sex, years of education, and favorite subjects in school. This information was entered into the research data base at the Center for Applied Personality Type, Gainesville, Florida.

The questions for the assessment of personality temperament were constructed to determine preference for how the respondent behaves or feels in certain situations. For example, the assessment identifies the four pairs of preferences that are fundamental to every personality type: Extraversion/Introversion, Sensing/iNtuition, Thinking/Feeling, and Judging/Perceiving.

McCaulley (1981) described the instrument as "one of a growing number of psychological instruments concerned primarily with variations in normal attitudes and behavior, rather than with psychopathology" (p. 294). In the past 10 years, the MBTI has become the most widely used of these type instruments in the world (M. McCaulley, personal

communication, December 8, 1993). The reliability and validity of the MBTI, as well as an explanation of temperament was discussed in Chapter 2.

Peer Helper Rating Scale (PHRS)

After a review of the literature of peer helper receptiveness to training and readiness to use the training for peer helping projects was completed, a peer helper rating scale (PHRS) was developed. The specific behaviors on the scale to identify peer helper readiness and receptiveness evolved both from a review of the literature and the assistance of five experienced peer helper trainers. These trainers have graduate education degrees in counselor education and are knowledgeable about peer helping. The behavioral items on the scale were based on recognized and accepted goals of peer helping programs and learning theory.

The researcher listed a number of behaviors and sent them to the peer helper trainers. They were asked to comment on the suitability of the items for measuring receptiveness to training and readiness for projects. Suggestions, additions, or deletions were invited. They were also asked to comment on whether a rater could distinguish between the two primary areas to be evaluated. The behaviors to be observed were considered valid indicators of readiness and receptiveness of the peer helpers.

The PHRS directions require the raters to read each statement and indicate the extent of agreement or disagreement by circling the appropriate choice. The

statements were written so that the choices (SA--strongly agree, A--agree, U--uncertain, D--disagree, and SD--strongly disagree) could be scored, with SA having the most weight and SD having the least weight when scoring. A copy of the Peer Helper Rating Scale is found in Appendix A. In order to determine the reliability of the Peer Helper Rating Scale, the researcher calculated a coefficient alpha after the instrument was administered.

Research Procedures

Students who were in the peer helping program for the school years 1990-1991, 1991-1992, and 1992-1993 were identified from school records by the researcher. Confidentiality was ensured by coding all names by assigning a number to each student after trainer's assessment with the Peer Helpers Rating Scale. Students' names were not used after assessment and their identity was kept anonymous.

The four rater/trainers worked with the peer helping students that they were to rate for one full semester while completing their internship in school counseling at the University of Florida. The raters had approximately 70 hours contact with each peer helper (14 weeks at 5 hours per week).

The four rater/trainers received a list of the students they trained and rated each one in terms of their receptiveness to training and readiness to help others. At the same time a rater/trainer received the student list, he or she received a copy of the PHRS with directions for assessing each student using the scale. The rater/trainer

completed the PHRS and it was returned to the researcher within 3 weeks.

The researcher scored the PHRS, matched scores with personality types, and then used codes to assure student anonymity. Analyses of the data were then conducted by the researcher.

Data Collection

The population sample of over 200 peer helping students (N = 245) provided a representative sample of peer helpers in Alachua County, Florida. Peer helping students participating in the peer counseling course were selected to represent a cross-section of the student population. Students who had taken peer helping for the school years 1988 through 1993 and who were trained by the raters, were included in the study.

The expected response rate of the trainers was 100%. The trainers were or have been graduate students in the Counselor Education Department at the University of Florida and had expressed an interest in helping with the research.

Analysis of the Data

The first hypothesis was tested using a Chi-square test to determine whether there is a significant difference between the personality types of the students in the peer helping program and students in the general population. This nonparametric statistical test is used to test hypotheses about central tendency, or the association between two categorical variables. The researcher was interested in

analyzing the number of subjects falling into particular personality categories.

Hypotheses 2 through 5 used a single factor analysis of variance (ANOVA) to test for significant differences existing among peer helper personality temperament in regard to their receptiveness to training and readiness to help others.

In Hypotheses 6 and 7, a two-factor ANOVA was used to test for significant interaction effects of peer helper gender and personality temperament on their receptiveness for training and readiness to help others. In Hypothesis 8 and 9, a two-factor ANOVA was used to test for significant interactions existing among peer helper ethicity and personality temperament in regard to their receptiveness for training and readiness to help others.

In analysis of variance, differences occurring between groups was treated as systematic variance, that is, variance attributable to the independent variable. Variance occurring within groups was interpreted to be random and, therefore, was treated as error. ANOVA contrasts systematic variance with error variances and a probabilistic decision was made as to whether group mean differences occur because of true differences in the population between groups or merely because of random error (Shavelson, 1988). For this study, a level of .05 was used as the criterion for significance. By convention the level of significance was set at .05 (Issac & Michaels, 1981).

CHAPTER 4
ANALYSIS OF DATA

This study was designed to examine how personality temperament, as measured by the Myers-Briggs Type Indicator, is related to peer helper receptiveness to training and readiness for helping others following training. The sample consisted of 245 high school students enrolled at Gainesville High School, Gainesville, Florida, during the 1990-1991, 1991-1992, and 1992-1993 school years. All subjects were sophomores, juniors, and seniors and had selected peer helping as an elective course.

The four raters were University of Florida counselor education graduate students completing their school counseling internships for their Specialist in Education degree. The raters directly participated in the initial orientation and peer training of the peer helpers.

Information about the reliability of the PHRS is reported in Tables 5 and 6. Tables 7 through 20 are related to the data collection and analysis for Hypotheses 1 through 9.

Sample

During the 1991-1992 school year, there were two peer trainers who were completing their internship. Each worked with two different peer helper class sections. Sixty percent of the peer helpers were iNtuitives while 40% of the

population were Sensors. The percentage of iNtuitives in a general secondary population is closer to 50% (see Table 2).

In both a review of the literature and an informal poll of peer helper programs nationwide, peer helping coordinators report ratios of 2 to 3 times females to males. The percentage of males to females seems to be the norm in self-selecting peer helping programs. In this study, there were almost three peer helping females to each male peer helper (see Table 3).

The ethnic breakdown of the peer helper population closely approximates the ethnicity of the general school population at Gainesville High School. White, African-American, Hispanic, and Asian ethnic students made up the 245 student population (see Table 4).

Reliability of the Peer Helper Rating Scale (PHRS)

Interrater Reliability

Interrater reliability or interjudge agreement (Smith & Glass, 1987) is sometimes used for those methods of measurement that require ratings, behavioral observations, or judgments of one individual by another. This being the case with using the Peer Helper Rating Scale to assess peer helper readiness for training and readiness to use the training. The procedure requires the same individual be observed and/or rated by two or more raters. Two peer helper raters rated 17 students they both had worked with while completing their counseling internship (1991-1992). The ratings given by these raters were then correlated and the percentage of

agreement was calculated to provide a measure of interrater reliability. The resultant statistics reflect the ability to generalize across potential judges or observers. A high value of the statistics indicates that the qualities assigned to the individuals are not limited by the personality of one judge. An r value of .81 and .80 for receptiveness to training and readiness to use training, respectively, are moderately high and indicate the assessment has an ability to generalize across raters (see Table 5).

Table 5
Interrater Reliability of PHRS

Variable	N	Mean	Standard Deviation
Receptiveness 1	17	24.35	8.61
Receptiveness 2	17	21.24	10.07
Readiness 1	17	30.71	10.72
Readiness 2	17	28.47	10.83
Total 1	17	55.06	19.07
Total 2	17	49.71	20.54

Pearson Correlational Coefficients
Receptiveness to training: r = .81
Readiness to use training: r = .80

Interrater Reliability of PHRS

Coefficient Alpha Procedure of PHRS

An alpha coefficient procedure for measuring internal consistency (Cronbach, 1990), which reports a reliability based on the average correlation of all pairs of items on the

PHRS, was performed. The procedure estimates the extent to which each item in the PHRS is measuring the same property. The procedure further helps in determining that assessment of a construct is not limited by the particular items chosen to measure it, but is generalizable across a population of such items. The results, using the Coefficient Alpha formula (Crocker & Algina, 1986) were

$$\alpha = \frac{K}{K-1}\left[1 - \frac{\Sigma\sigma_i^2}{\sigma_c^2}\right]$$

$$\sigma_c^2 = 83.487$$

$$\Sigma\sigma_i^2 = 11.6645$$

$$\alpha = .96^*$$

An alpha of .96 was determined for the internal consistency of the questions dealing with peer helper receptiveness for training. An alpha of .96 indicates a strong degree of internal consistency. Thus, it helps confirm the consistency of the PHRS for the assessment of peer helper receptiveness for training. The same formula was used to determine the internal consistency of the PHRS's assessment of the peer helpers' readiness to use the training.

$$\alpha = \frac{K}{K-1}\left[1 - \frac{\Sigma\sigma_i^2}{\sigma_c^2}\right]$$

$$\sigma_c^2 = 140.397$$

$$\Sigma\sigma_i^2 = 15.337$$

$$\alpha = .97$$

An alpha score of .97 indicates a very strong degree of consistency of the PHRS for the assessment of peer helper readiness to use training.

Test-Retest Reliability of PHRS

Further testing of the instrument was performed by repeating the measurement procedure on the same set of subjects. Rater 1 (1990-1991) assessed 20 subjects and then assessed the same subjects 5 weeks later. The source of error assessed here is that of fluctuating, temporary characteristics of the subjects. Reliability coefficients range from r = 0.00 (indicating that all the variance in the measurement procedure is due to error) to r = 1.00 (indicating perfect reliability). The reliability score for receptiveness to training was r = .72. While the reliability score for readiness to use the training was r = .68 (see Table 6). The moderate reliability scores may be due to R1 being away from the subjects the longest and also waiting 5 weeks between ratings.

Hypotheses Testing

There were four hypotheses tested that were related to the personality temperament of students and their receptiveness to training and readiness to be helpers. Additional hypotheses focused on the comparisons to the general population, ethnicity, and gender differences. The findings on each of the hypotheses are presented on the following page.

Table 6
The Test-Retest Reliability of PHRS

Variable	N	Mean	Standard Deviation
Receptiveness 1	20	17.95	7.92
Receptiveness 2	20	19.30	9.87
Readiness 1	20	27.90	11.78
Readiness 2	20	31.60	12.11
Total 1	20	45.85	19.09
Total 2	20	50.90	21.26

Pearson Correlation Coefficients
Receptiveness to training: r = .72
Readiness to use training: r = .68

Hypothesis 1: Personality Temperament

H1: There will be no significant difference in personality temperament, as measured by Myers-Briggs Personality Type, between students in the peer helping program and students in the general population.

Since there was a gender factor reported in the literature pertaining to certain temperament types being more common among males or females, the researcher chose to look at gender as a factor in the analysis of H1. Therefore, a statistical Chi-square was conducted with both the male and female populations to determine if there was any significant difference in personality temperament between students in peer helping and students in the general population.

The expected temperament types among traditional age high school students are shown in Table 7. The percentages of types in the peer helper population are shown in Table 8. The data for Table 7 was compiled from the CAPT-MBTI data bank of MBTI records submitted to CAPT for computer scoring between 1971 and December 1982. The subjects were males and females between 15 and 18 years of age inclusive, enrolled in school, and had completed more than 9 but less than 12 years of school.

Table 7
Expected Temperament Types Among Traditional Age High School Students

Females		Males	
Temperament Type	Percentage	Temperament Type	Percentage
NF	36.47	NF	21.10
NT	11.76	NT	27.49
SJ	28.69	SJ	25.42
SP	23.09	SP	26.00

Table 8
Temperament Types by Gender in Peer Helper Population

Females		Males	
Temperament Type	Percentage	Temperament Type	Percentage
NF	47.2	NF	44.6
NT	10.0	NT	23.1
SJ	19.4	SJ	12.3
SP	23.3	SP	20.0

A statistical Chi-square for the male population was determined to be X = 22.84 with the critical Chi-square of X = 7.81. To be significant, the statistical Chi-square needed to be greater than 7.81 and it indicated a significant difference.

The same statistical procedure was used with the female population to produce a statistical Chi-square of X = 11.56 and a critical Chi-square of X = 7.81. The statistical Chi-square was greater than the critical Chi-square, thus it indicated a significant difference. Since there was a significant difference between the traditional high school population and the peer helping population in both male and female populations, H1 was rejected.

Hypothesis 2: Receptiveness to Training

H2: There will be no significant difference in peer helper receptiveness for training, as measured by a Peer Helper Rating Scale, between Sensing (S) and iNtuitive (N) types, as measured by the Myers-Briggs Type Indicator.

An ANOVA statistical procedure was used to test for significance at the .05 level between the Sensing and iNtuitive types in regard to their receptiveness for training. An F value of 11.47 was found, which produced a significant difference ($p = 0.0008$) between the Sensing and iNtuitive types, thus H2 was rejected (see Table 9).

Hypothesis 3: Readiness to Help Others

H3: There will be no significant difference in peer helper readiness to help others between Sensing (S) and iNtuitive types (N).

Table 9
Source Table for the Analysis of Variance for the Peer Helper Receptiveness to Training and Sensing and iNtuitive Types

Dependent Variable: Receptiveness to training				
Source	df	M.S.	F	p
iNtuitive and Sensing temperament	1	918.53	11.47	0.0008*
Error	243	80.05		

*Significant difference between the Sensing and iNtuitive types as to their receptiveness for training.

An ANOVA statistical procedure was used to determine if there was a statistically significant difference at the .05 level between peer helper Sensing and iNtuitive types as to their readiness to help others. An F value of 7.86 was found. This resulted in a difference at the 0.0055 level between the peer helper Sensing and iNtuitive types in regard to their readiness to help others (see Table 10). H3 was rejected.

Table 10
Source Table for the Analysis for Variance of Peer Helper Readiness to Use Training and Sensing and iNtuitive Types

Dependent Variable: Readiness to help others				
Source	df	M.S.	F	p
iNtuitive and Sensing Temperament	1	1073.15	7.86	0.0055*
Error	243	136.56		

*Significant difference between iNtuitive and Sensing temperament and readiness to help others.

Hypothesis 4: Temperament and Receptiveness to Training

H4: There will be no significant effect of personality temperament (NF-NT and SJ-SP) and peer helper receptiveness for training.

An ANOVA statistical procedure was performed to determine if there was a significant effect at $p < .05$ between the peer helpers' four temperament types and their receptiveness for training. A significant effect ($p = 0.0006$) was determined (see Table 11).

Table 11
Source Table for the Analysis of Variance of Peer Helper Temperament and Receptiveness for Training

Dependent Variable: Peer helper receptiveness for training				
Source	df	M.S.	F	p
Temperament	3	468.82	5.95	0.0006*
Error	241	78.69		

*Significant effect of peer helper temperament on peer helper receptiveness for training $p < .05$.

A follow-up comparison test was run because a significant effect was found with the ANOVA statistical procedure. The Tukey HDS test was used to compare the four temperaments with receptiveness for training. The significant difference between peer helper temperaments and receptiveness for training is illustrated in Table 12. All pairs of temperaments showed significant difference except there was no significant difference between NT and SJ with respect to receptiveness for training. Therefore, because

there was a significant effect and a significant difference on the follow-up comparison test, H4 was rejected.

Table 12
Source Table for the Tukey HDS Test for Temperament and Receptiveness for Training

Dependent Variable: Peer helper receptiveness for training	
Critical variable:	p > .366
Source	p
NF vs. NT	6.15*
NF vs. SJ	5.67*
NF vs. SP	10.45*
NT vs. SJ	00.47
NT vs. SP	4.30*
SJ vs. SP	4.78*

*Significant effect of peer helper temperaments on peer helper receptiveness for training.

Hypothesis 5: Temperament and Readiness to Help Others

H5: There will be no significant effect of personality temperament (NF-NT and SJ-SP) on peer helper readiness to help others.

Hypothesis 5 is similar to H4, except that it focused on readiness to work with others in peer helper projects. An ANOVA was used to determine whether there was a significant difference at .05 between readiness to help others and temperament. A significant difference ($p = 0.0111$) was determined (see Table 13).

The ANOVA indicated a significant effect. Consequently, in a follow-up, the Tukey HDS test was administered to determine what significance was present. As illustrated in Table 14, four of the six combinations showed statistical significant

Table 13
Source Table for the Analysis of Variance of Peer Helper Temperament and Readiness to Help Others

Dependent Variable: Readiness to help others				
Source	df	M.S.	F	p
Temperament	3	513.84	3.79	0.0111*
Error	241	135.75		

*Significant effect of temperament on peer helper readiness to help others.

Table 14
Source Table for the Tukey HDS Test for Temperament and Peer Helper Readiness

Dependent Variable: Peer helper readiness to help	
Critical value: p > 3.66	
Source	p
NF vs. NT	4.54*
NF vs. SJ	4.72*
NF vs. SP	8.35*
NT vs. SJ	0.18
NT vs. SP	3.81*
SJ vs. SP	3.63*

*Statistical difference with critical value p > 3.66 between peer helper temperament on peer helper readiness to use training.
Note: SJ vs. SP with p = 3.63 was very close to statistically significant difference at p > 3.66.

difference (p > .05). The same temperament combination, NT vs. SJ as in H4, showed no significant difference. However, SJ vs. SP also showed no statistical significant difference at the critical value of p > 3.66. However, SJ vs. SP had a critical value of p = 3.63, very close to statistically significant p > 3.66. Therefore, because statistical effect was found using an

ANCOVA and a significant difference was observed with the follow-up Tukey HDS test, H5 was rejected (see Table 14).

Hypothesis 6: Gender, Temperament, and Receptiveness for Training

H6: There will be no significant interaction effect of personality temperament and gender on peer helpers' receptiveness for training.

An ANOVA statistical test was administered to determine if there was a significant interaction at the .05 level of gender and temperament on the peer helpers' receptiveness for training. No significant effect of the peer helpers' gender, or gender x temperament on their receptiveness for training was found. Therefore, H6 was not rejected (see Table 15).

Table 15
Source Table for the Analysis of Variance of Peer Helpers' Gender and Temperament and Their Receptiveness for Training

Source	df	M.S.	F	p
Temperament	3	546.68	6.98	0.0002*
Gender	1	230.61	2.95	0.0874
Temperament by Gender	3	109.93	1.40	0.2422
Error	237	78.28		

*Significant effect of temperament on peer helper receptiveness for training, same results as found earlier. No significant interaction effect at .05 between gender and temperament of peer helpers on their receptiveness for training.

Hypothesis 7: Gender, Temperament, and Readiness to Help Others

H7: There will be no significant interaction of personality temperament and gender on peer helpers' readiness to help others.

Hypothesis 7 was similar to H6. An ANOVA test was used to determine if there was a significant interaction at .05 level of peer helper gender and temperament, on readiness to help others. No significant difference ($p = < .05$) was found (see Table 16). Therefore, H7 was not rejected.

Table 16
Source Table for the Analysis of Variance of Peer Helper Readiness to Help Others and Gender and Personality Temperament

Dependent Variable: Peer helper readiness to help others

Source	df	M.S.	F	p
Temperament	3	517.92	3.77	0.0113*
Gender	1	42.71	0.31	0.5775
Temperament by Gender	3	62.67	0.46	0.7128
Error	237	137.24		

*Significant difference in peer helper temperament and their readiness to help others. No significant effect at .05 between gender and personality temperament of the peer helpers and their readiness to help others.

Hypothesis 8: Ethnicity, Temperament, and Receptiveness for Training

H8: There will be no significant interaction of personality temperament and ethnicity on peer helpers' receptiveness for training.

An ANOVA was employed to determine if there was a statistical difference at the .05 level in peer helper ethnicity and personality temperament and their receptiveness for training. No significant difference was found, $p = 0.2335$ (see Table 17). Therefore, H8 was not rejected.

Table 17
Source Table for the Analysis of Variance of Peer Helper Receptiveness for Training and Ethnicity and Personality Temperament

Dependent Variable: Peer helper receptiveness for training

Source	df	M.S.	F	p
Temperament	3	384.49	4.95	0.0024*
Ethnicity	3	147.70	1.90	0.1300
Temperament and Ethnicity	9	101.58	1.31	0.2335
Error	229	77.65		

*Significant difference at .05 in peer helper temperament and their receptiveness for training. No significant interaction effect of peer helper ethnicity and temperament on their receptiveness for training.

Hypothesis 9: Ethnicity, Temperament, and Receptiveness for Training

H9: There will be no significant interaction of personality temperament on ethnicity of peer helpers' readiness to help others.

An ANOVA statistical test was used to determine if there was an interaction effect at the .05 level between ethnicity and temperament on readiness to help others. It was determined that the overall ethnic and personality

temperament effect was p = 0.1631 and not significant at the .05 level (see Table 18). Therefore, H9 was not rejected.

Table 18
Source Table for the Analysis of Variance of Peer Helper Readiness to Help Others and Ethnicity and Temperament

Dependent Variable: Peer helper readiness to help others				
Source	df	M.S.	F	p
Temperament	3	560.00	4.20	0.0064*
Ethnicity	3	297.47	2.23	0.0852
Temperament by Ethnicity	9	194.85	1.46	0.1631
Error	229	133.26		

*Significant difference at .05 in peer helper temperament and their readiness to help others. No significant interaction effect of peer helper ethnicity and temperament on their readiness to help others.

As a final statistical procedure, an analysis of variance was performed on each of the two dependent variables and all independent variables examined in Hypotheses 4 through 9. The independent variables peer helper temperament, gender, ethnicity, temperament and gender, temperament and ethnicity, gender and ethnicity, temperament, gender and ethnicity were tested for any significant interaction between the independent variables and the two dependent variables. The data showing the results of the ANOVA performed between these independent variables and peer helper receptiveness to training is listed in Table 19. No significance at the .05 level was found, except between peer

Table 19
Source Table for the Analysis of Variance for All Independent Variables Tested and Peer Helper Receptiveness to Training

Dependent Variable: Peer helper receptiveness to training				
Source	df	M.S.	F	p
Temperament	3	615.2	8.03	0.0001*
Gender	1	186.0	2.43	0.1205
Ethnicity	3	160.3	2.09	0.1021
Temperament by Gender	3	162.2	2.12	0.0988
Temperament by Ethnicity	8	135.8	1.77	0.0834
Gender by Ethnicity	2	64.7	0.85	0.4309
Temperament by Gender and Ethnicity	5	99.4	1.30	0.2658
Error	218	76.6		

*Significant difference in peer helper temperament and peer helper receptiveness to training ($p = < .05$). No other significant difference found.

helper temperament and peer helper receptiveness to training. When the same statistical procedure (ANOVA) was performed on the same independent variables and peer helper readiness to help others, no significance at the .05 level was found, except between peer helper temperament and peer helper readiness to help others (see Table 20).

These results were consistent with other ANOVA statistical procedures used to test for statistical significance between individual independent variables and each of the two dependent variables. All findings seem to indicate that statistical significance at the .05 level

exists only between peer helper temperament (independent variable) and peer helper receptiveness to training and readiness to use the training (dependent variables).

Table 20
Source Table for the Analysis of Variance for All Independent Variables Tested and Peer Helper Readiness to Help Others

Dependent Variable: Peer helper readiness to use training				
Source	df	M.S.	F	p
Temperament	3	826.05	6.12	0.0005*
Gender	1	18.16	0.13	0.7142
Ethnicity	3	281.27	2.08	0.1033
Temperament by Gender	3	159.72	1.18	0.3171
Temperament by Ethnicity	8	223.55	1.66	0.1106
Gender by Ethnicity	2	31.71	0.23	0.7909
Temperament by Gender and Ethnicity	5	153.09	1.13	0.3433
Error	218	135.01		

*Significant difference in peer helper temperament and peer helper readiness to use their training ($p = <.05$). No other significant difference found.

In conclusion, the peer helper students studied were significantly different from the traditional high school students in both male and female populations. A significant difference between Sensing and iNtuitive types in regard to their receptiveness for training and readiness to help others was established. All pairs of temperaments showed significant difference, except between NT and SJ, with respect to receptiveness for training. Further, all pairs of

temperaments showed significant difference, except between NT and SJ, and SJ and SP, with respect to readiness to help others. However, the analysis of results showed no significant interactions or mean effects for all other independent variables studied; gender, ethnicity, temperament by gender, temperament by ethnicity, gender and ethnicity, and temperament, gender by ethnicity (independent variables) on each dependent variable.

In the final chapter, results are discussed in relation to the literature and conclusions are drawn. Implications of the study, limitations, and recommendations for further research are also covered.

CHAPTER 5
SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

There are five sections in this chapter. The first provides a summary of the research problem and design. It is followed by a summary of the findings. In the third section, conclusions and limitations derived from the data are discussed. Section four contains a discussion of the implications of the research and the concluding section focuses on final recommendations.

Summary of Research Study

The purpose of this study was to examine how personality type is related to peer helper receptiveness to training and readiness for helping others following training. More specifically, four different pairs of personality types, as measured by the Myers-Briggs Type Indicator (MBTI), were studied in terms of their relationship to high school students who were selected to be prepared as peer facilitators and these students' subsequent receptiveness to training and readiness for helping others in projects. The population consisted of 245 students over a period of 4 years who were enrolled at Gainesville High School, Gainesville, Florida, and who were selected to take part in the Peer Helper Training Program. The ethnicity of this population of peer helpers very closely parallels that of the general

Gainesville High School population. These peer helping students also appear to be representative of peer helping students at other high schools in the community.

Two criterion instruments were used in the study, one to determine personality temperament and the other to estimate both receptiveness to training and readiness to help others following training. The Myers-Briggs Type Indicator (MBTI) was used to determine personality temperament. A Peer Helper Rating Scale (PHRS) with a Likert-type assessment scale, developed by the researcher, was used to assess receptiveness to training and readiness to help others.

Conclusions

An analysis of variance procedure was used to test each of the null hypotheses, except for Hypothesis 1 for which a chi-square was used. Five hypotheses were rejected and four were accepted.

Temperament of Peer Helpers vs. Temperament of General Student Population

Hypothesis 1, which focused on possible difference between peer helper personality temperament and temperament in the general high school population, was tested using a Chi-square. Since a gender difference has been observed in personality temperament research a statistical Chi-square was performed for both male and female student populations. The statistical Chi-square for both the male and female population was determined to be larger than the critical Chi-squares. Therefore, H1 was rejected.

It might be expected that the peer helping population would more closely approximate a population of helping professionals than the general student population. The largest peer helper temperament type found among the peer helpers in the study was NF. This is also the largest temperament type of counselors, social workers, psychologists, clergy, and teachers (Carskadon, McCarley, & McCaulley, 1987).

According to Kroeger and Thuesen (1988), NFs look at the world and see possibilities (iNtuition), then translate those possibilities inter and intrapersonally (Feeling). They enjoy being with people. Representing about 12% of the general population, they are the idealists of life and tend to serve causes that advance human interests: teaching, humanities, counseling, religion, and family medicine, among others (Kroeger & Thuesen, 1988). This temperament type would appear to be a natural predisposition of students choosing to become peer helpers. About 45% of the peer helpers in this study were NFs. Thus, the results of the analysis of data for H1 are congruous with current research in the field of personality type.

Peer Helper Receptiveness for Training and Its Relationship to Sensing (S) and iNtuitive (N) Types and Peer Helper Readiness to Help Others and Its Relationship to Sensing (S) and iNtuitive (N) Types

Analysis of the data on the second and third hypotheses, between peer helping Sensing (S) and iNtuitive (N) types regarding their receptiveness for training and readiness to

help others respectively, established a statistically significant difference in both instances. Thus, both H2 and H3 were rejected.

It is concluded that there is a difference between peer helper Sensing and iNtuitive types in regard to their receptiveness for training and readiness to help others. The information-gathering function, the never-ending process of taking in information about the world around us, is generally considered first in understanding personality type. The logic is that nothing else takes place without first gathering information. The iNtuitive peer helpers scored statistically significantly higher on the PHRS than the Sensing peer helpers. These iNtuitive peer helpers were seen by the raters as being more receptive for training and ready to help others than their Sensing peer helper counterparts.

An explanation for this difference may be found in Jungian theory. The Sensing/iNtuitive function involves gathering information about one's world. Although Jung said that these were functions of the personality (Jung, 1923), contemporary Jungian theorists suggest that they are in some ways part of the very processes of life (Myers & Myers, 1980). Sensors prefer to focus on the facts and details of something and need less to interpret what they mean. They like things presented to them in an exact and sequential manner and rely on their five senses as a means of gathering information. They are certain about only those things they can taste, touch, see, hear, and smell (McCaulley, 1977).

The iNtuitives are more figurative about their five senses, and translate through their intuition, looking for possibilities, meaning, and the relationships between and among various things. The iNtuitive looks at the grand scheme, the holistic aspect of things, and tries to put things into some theoretical framework (Dunn & Dunn, 1978).

When examining the content, philosophy, and goals of peer helping, one could conclude that the iNtuitive might find more to interest and stimulate them. In fact, iNtuitives make up only about 30% of the general secondary school population (Myers & McCaulley, 1985), yet they comprise 60% of the peer helper population.

Some factor or factors are drawing iNtuitive students to the peer helping class. Much of peer helping is about understanding the human condition and relationships. Peer helpers are asked to help people through their understanding and insights into theories of personality and communication. This theoretical side of the iNtuitive peer helper might help them to gravitate to the theoretical framework of the peer helping curriculum. The inspirational and future orientation of iNtuitives may further explain a greater enthusiasm, receptiveness for training and readiness to help others. Considering the nature of iNtuitive types, the results of statistical procedure for H2 and H3 appear logical and concurrent with temperament research.

Peer Helper Receptiveness for Training and Temperament Type; Peer Helper Readiness to Help Others and Temperament Type

The fourth hypothesis tested involved personality temperament (NF-NT and SJ-SP) and peer helper receptiveness for training. The significance of personality temperament and peer helper receptiveness for training was analyzed using ANOVA procedures. The results showed a significant interaction between peer helper temperament and peer helper receptiveness for training. Using a follow-up comparison test to compare the four temperaments with receptiveness to training, significant differences between NFs and NTs, NFs and SJs, NFs and SPs, NTs and SPs, and SJs and SPs were found. Only between NTs and SJs was there no significant difference observed. Hypothesis 4 was rejected, considering that five of the six possible combinations of temperaments had significant effect.

Analysis of Hypothesis 5 showed a statistically significant difference in peer helper personality temperament (NF-NT and SJ-SP) and statistically significant difference in peer helper readiness to help others. As with H4, an ANOVA procedure was performed to determine if there was a significant interaction between the temperaments and readiness to help others. A significant interaction was found. A follow-up Tukey HDS was administered and significance was established between NF and NT, NF and SJ, NF and SP, and NT and SP. Therefore, H5 was rejected.

According to Keirsey and Bates (1984), authors of Please Understand Me, temperaments are useful because they afford the widest base of accurate behavioral predictions. So, even if we do not understand how all four letters fit together, the 2-letter Temperament helps us predict how people teach, learn, lead others, and relate to others. Further, understanding temperament might help explain the significant differences between the peer helper Temperaments and their receptiveness for training and readiness to help others. Before going further, it should be noted that temperament is never an excuse for behavior, but an explanation for preferences related to the basic functions our personalities perform throughout life.

Since peer helping is not the typical high school course, with the focus on helping people, looking at the curriculum might help explain why certain temperaments are going to be more drawn to it. Explaining why one temperament over another is more receptive to the training and ready to help others sooner may be very helpful in peer helping curriculum development and training.

For instance, NFs tend to find their hunger not centered on things, but people. Not content with abstractions, they seek relationships which can fall into a pattern of enthusiastic anticipation accompanied by a considerable investment of effort and emotion. It is a natural for the NF to be involved with people, helping them, understanding them,

and giving meaning to their own lives (Golay, 1982). These attributes are the natural components of a peer helper.

Those with the NT temperament are different and quite possibly would appear to be a different type of peer helper. The NT is involved with speculation about the possible motivations and thoughts of those he or she is with and tries to fit what he/she is experiencing into some system or model they carry around in their head. Because of these active inner experiences they sometimes miss perceiving direct events. They may become so occupied with trying to figure out what is happening as it is happening that they miss living the event. At times, an NT can be quite oblivious to the emotional responses of others and may not always be sensitive to the complexities of interpersonal relations. In their communications the NT is likely to speak with little or no redundancy. Their communications tend to be terse, compact, and logical. The NT tends to place little reliance on nonverbal qualifiers and, at times, is oblivious to emotional "metamessages" in others' communications (Delunas, 1983). Therefore, the NT might be slightly disadvantaged within the peer helping group because of the interactive way peer helping curriculum is generally presented and the emphasis on understanding nonverbal communications. The seeming lack of sensitivity might be viewed by the raters as not being as ready to help others after training.

Keirsey and Bates (1984) further report that SPs are viewed as impulsive. "They want to be impulsive. At bottom,

the SP must be free; he will not be tied or bound or confined or obligated. To do as he wishes when he wishes, that is the ideal. To wait, to save, to store, to prepare, to live for tomorrow--that is not the way." (p. 31) In peer counseling, where responsibility and being a productive part of the group is seen as paramount, this Temperament might sometimes feel inhibited. In defense of this Temperament, Keirsey and Bates (1984) wrote, "This is not to say the SP does not acquire goals and ties just like the rest of us. He does, of course, only they are fewer and more tentatively held. If the ties become too numerous or too binding, then the SP is likely to become restless and perhaps experience the urge to take off for 'somewhere else'." (p. 31-32) Of course, a fundamental concern of peer helper instructors whose programs include helping students both on and off campus is that of peer helpers acting responsibly and dependably. Since the SPs scored the lowest on the ratings for receptiveness for training and below the NFs on the readiness to help others, the impulsiveness might be seen by the raters as uncommitted or uncooperative.

The idea of action for itself can best be understood by comparing "practice" with "compulsion." Practice, first of all, is what we all do to improve our skill in preparation for performance or work. There is much practice of listening and communication skills in the peer helping curriculum. Keirsey and Bates (1984) wrote, "SPs, however, do not wish to practice, since it is only preparation for action later on.

The SPs do not practice, they do. Indeed, the SP must do what he feels the urge to do. He must do what his impulse dictates and continue the action as long as the urge compels. Taken literally, if the SP peer helper chooses not to practice, or has an urge to do something else, this would be seen as reluctance to participate within the group." (p. 32) This receptiveness or eagerness was one of the behaviors being evaluated on the PHRS for being receptive for peer helper training. Clearly, a peer helper who refused to participate in peer helping training activities would receive a lower rating on the scale.

The SJ temperament seems to lend itself to certain aspects of the peer helping program. Being more of a group than just a class with many activities that solidify group cohesion, the SJ may find a place to belong. Keirsey and Bates (1984) observe, "the SJ must belong, and this belonging has to be earned. Here is no freeloader, urging his dependency upon the donors as if it were his god-given right. Dependency, for the SJ, is neither a legitimate condition nor desire. The SJ feels guilty for his dependency as if derelict in his duty and negligent of his obligations. Moreover, he must be the giver, not the receiver; the caretaker, not the cared for." (p. 40) In a course, with a primary goal of caring for and helping others this type seems to fit well.

The SP is compelled to be free and independent, while the SJ is, in effect, compelled to be bound and obligated.

These might usefully be viewed as reciprocal needs. Indeed, it may well be that the character of the SJ can better be illuminated if seen in reciprocity with the SP character (Schemel & Borbely, 1982).

First, while the SJ lives a Stoical ethic, the SP lives an Epicurean ethic--a work ethic as against a play ethic. We must emphasize that these both are ethics. One is not bad and the other good; they both differing views of the good (Stevens, 1982). However, when evaluating peer helping receptiveness to training and readiness to use the training to help others if one student is an eager, active participant and another is not, the eager, active participant will be viewed more positively.

Second, while an SP may support their fraternal and libertarian outlook with a belief in and desire for equality, the SJ may support their parental and responsibility purposes with a belief in and desire for hierarchy (Golay, 1982). Keirsey and Bates (1984) further observe that for the SJ the hierarchial structure of society is the essence of society. There should be subordinance and superordinance. There should be rules which govern the interactions of members, certainly in the school and church, but also in the family (Keirsey & Bates, 1984). It has been observed by the researcher that to many SJs, as well as other temperaments, the peer helping group may become a surrogate family. The SJ will work hard in the group, follow the rules, learn the material, and create and foster the continuity of the social

units: the family, the church, the service club, and the peer counseling class. This duty to serve, give, and care for, makes the SJ a strong peer group member and one that might be perceived as receptive for training and then ready to help others (Golay, 1982). These characteristics might help them do well on the PHRS evaluations on receptiveness and readiness.

To the defense of the SP in a peer helping program, in the SP's paradoxical way, he or she is also the most fiercely fraternal of all the temperaments. An SP lives esprit de corps, is loyal to his brothers (group members), and defends their group against all attacks (Keirsey & Bates, 1984). The researcher observes, if an SP believes in the peer helping program and goes through the training with "compulsion" they will be ready to help others and be perceived as such. This is a plausible explanation why the SPs and SJs were not statistically different on the PHRS in regards to their readiness to help others.

Although it is difficult to explain precisely the reasons for differences between peer helpers with differing temperaments and their receptiveness for training and readiness to help others, it is clear that differences do exist between the peer helpers of the four different temperaments.

Peer Helper Temperament and Gender and Their Receptiveness for Training; Peer Helper Temperament and Gender and Their Readiness to Help Others

An ANOVA was performed to determine if there was any statistical difference between peer helper gender on gender x personality temperament interaction on their receptiveness to training. There was no statistically significant difference between the peer helpers' gender and no gender x personality temperament interaction. Hypothesis 6 was not rejected.

To test Hypothesis 7 an ANOVA was administered to determine if there was any effect on peer helper gender or gender x personality temperament interaction on peer helper readiness to help others. There was no statistical significance due to the peer helpers' gender and no gender x personality temperament effect on their readiness to help others. Hypothesis 7 was not rejected.

It may be concluded that gender is not a significant factor in the peer helper receptiveness for training and readiness to help others. Nor does gender interact with personality temperament. Since most peer helper programs seem to attract more females than males this might not be a significant problem. However, having a balanced program with a relatively equal number of males and females seems to be a desired goal of many peer helping programs (North Carolina Peer Helpers Association Convention, personal communication, February 11-12, 1993). The researcher feels that this information is of further value in implementing and improving the training program for peer helpers. The training

activities were seen as effective for either gender. Both males and females were equally receptive to the training and ready to use the training. Although females are sometimes viewed as more the helping type, this is not necessarily correct. Males can be trained just as receptively and prepared as readily as females.

Peer Helper Ethnicity and Temperament and Their Receptiveness to Training; Peer Helper Ethnicity and Temperament and Their Readiness to Help Others

The results of the tests for Hypothesis 8 showed that there was no significant interaction effect of ethnicity and personality temperament of the peer helpers on their receptiveness to training. An ANOVA statistical procedure was performed to determine if their was any significant interaction effect on peer helper ethnicity and temperament on their receptiveness for training. No significant effect was found and H8 was not rejected.

The results of the ANOVA conducted to test Hypothesis 9 reject this null hypothesis; there is no difference between peer helper ethnicity and personality temperament and their readiness to use training. No significant effect was found and HO9 was not rejected.

It may be concluded that ethnicity is not a statistically significant factor in peer helper receptiveness for training and readiness to help others. While a peer helper's temperament appears to be a significant factor in peer helper receptiveness for training and readiness to help others, temperament and ethnicity do not appear to be

factors. As peer helping programs are being established in schools with both heterogeneous and homogenous student populations in urban, suburban, and rural schools, this information could be very helpful in starting these programs. Only the desire to receive the training and use that training to help others seems to matter.

Limitations

The study had several limitations related to generalization. One limitation was the geographic population from which this sample was drawn. Several hundred students from one high school in Florida might not be a representative sample of high school students in America, the Southeast, or even Florida. Another limitation may be the students themselves who were included in the sample. Participants were those who chose to be in a helping-oriented course. Therefore, the findings of the study might only be generalizable to 10th, 11th, and 12th grade students who have elected to take a course with a focus on helping people.

The study was also limited by the instruments used. The MBTI has associated with it extensive reliability and validity data. However, as a self-report measure, it may reflect the students' self-perceptions. The use of a new instrument (PHRS) further limits the study.

Implications and Recommendations

Specific recommendations and implications arising from this study might include the following:

It appears that students of particular temperaments choosing to be in peer helping programs might closely approximate the temperament types of people that choose to go into adult helping professions (Myers & McCaully, 1985). Thinking types (Ts) are often drawn to jobs and professions that do not involve embroiling themselves in a lot of interpersonal relationships. Their counterparts, Feeling types (Fs), are frequently attracted to professions (or a course) that involve more interpersonal dynamics like peer helping. It is fair to assume that most peer helping classes are going to have a higher percentage of NFs than the general student population. Further, personality temperament might be a significant factor in understanding a peer helper's receptiveness to the peer helping training and peer helper readiness to use the training. Addressing the peer counseling curriculum with an understanding of temperament could help make the learning process more effective and be a further implication of this research.

For example, a closer look at the peer helper selection process and training methods could be enhanced based on understanding temperament differences. For instance, Dr. Keith Golay, a therapeutic counselor in Fullerton, California, has worked extensively with type and temperament theory and learning styles. The NFs are most responsive to working in small groups and sharing information. They also do well doing role-playing to display problems with people. These are already well-utilized training methods in many peer

helping programs around the country. The NFs are naturally draw to theory and do well with reading books on the subject and writing papers.

Golay reports the NT is most responsive when learning by having a debate on the pluses and minuses of a subject. This temperament does well doing research in a library, reading books on the subject, and designing a test over the material being studied.

The SJs will be most responsive when learning by going to the library and getting information, collecting information, and putting it in a document. Interviewing people for information--designing an interview format to use, i.e., the questions to ask, is highly productive for SJs.

In dealing with the prospect of future grades versus present gratifications, the here-and-now SP swims against a strong current. Our educational system rewards theory. And the more theory you have, the more you are rewarded with grades, degrees, and status. The statistics bear this out, while constituting about 35% of the US population, they are the least likely to receive college degrees (Keirsey & Bates, 1984).

SPs will be most responsive when learning by viewing films on the subject and interviewing people. This was the temperament that received the lowest overall ratings on the PHRS.

Knowing peer helper temperaments might be very useful in determining the training methods and duration of some of the

training. Further, it might be useful in the selection process of the potential peer helpers.

A peer helper's gender does not seem to be a significant factor in their receptiveness to training and readiness to use the training. This information might be helpful in the training of peer helpers, as well as the selection process for potential peer helper candidates. Since peer helper programs tend to have populations that have a disproportionate number of females, this information seems encouraging. A peer helping program can effectively train and prepare male or female students as helpers. However, that doesn't mean that peer helping programs should not attempt to have more balanced gender ratios, if possible. Having a balanced program with a relatively equal number of males and females seems to be a desired goal of many peer helping programs (North Carolina Peer Helpers Association Convention, personal communication, February 11-12, 1993).

Ethnicity does not seem to be a significant factor in a peer helper's receptiveness to training or their readiness to use the training. This information might be helpful in the selection process, training, and service of the peer helpers. As peer helping programs are being established in schools with both heterogeneous and homogenous populations in urban, suburban, and rural schools, this information could be very helpful in establishing their programs. It does not seem to matter what the peer helpers' gender or ethnic background is,

only the desire to actively receive the training and use it to help others.

In further studies, more emphasis could be placed on temperament and peer helper effectiveness following the training. Temperament appears to be a significant factor in peer helper receptiveness for training and readiness to use that training. Thus, looking at temperament and effectiveness of the peer helpers following training appears to be a logical next step. Further implications of the present research apply in the area of the peer helping training program. The temperament of peer helpers appears to be important in understanding and enhancing their learning styles. Adjusting the curriculum, varying the training program for the various learning styles appears to have promise. Two apparent results are that certain temperaments appear to be drawn to the course and certain temperaments are rated higher on the PHRS.

Knowledge of which specific personality temperament is closely related to readiness for peer helping might be useful in establishing a criterion beneficial in the selection and training of peer helpers. Therefore, the results of this research can be used to demonstrate the relationship between using the MBTI as a tool in the training of peer helpers and development of more effective training methods. Furthermore, it can be used to add to the theory underlying the MBTI, personality type and temperament, and learning styles.

The use of peer helpers in school settings is a useful tool to expand the guidance services. It is being widely done throughout the United States and Canada. It is likely that the use of peer helpers will continue to grow. This study has provided some evidence that personality temperament is related to peer helper receptiveness to training and readiness to use the training.

APPENDIX A
PEER HELPER RATING SCALE

Peer Helper Rating Scale

Read each of the statements below. Indicate the extent of your agreement or disagreement with each statement by circling the appropriate letters to the right:

SA-Strongly Agree; A-agree; U-Uncertain; D-Disagree; SD-Strongly Disagree.

Please respond to all of the statements.

Receptiveness to training

1. The peer helper voluntarily participated in the peer helping group.	SA	A	U	D	SD
2. The peer helper self-disclosed personal feelings in the peer helping group.	SA	A	U	D	SD
3. The peer helper shared ideas in the peer helping group.	SA	A	U	D	SD
4. The peer helper was open to learning new ideas.	SA	A	U	D	SD
5. The peer helper followed directions.	SA	A	U	D	SD
6. The peer helper was amenable to criticism.	SA	A	U	D	SD
7. The peer helper wrote regularly in his/her personal journal.	SA	A	U	D	SD
8. The peer helper developed a congenial working relationship towards the peer trainer.	SA	A	U	D	SD
9. The peer helper was friendly towards other peers in training.	SA	A	U	D	SD
10. The peer helper was respectful of the feelings of others.	SA	A	U	D	SD

Readiness for projects:

11. The peer helper was attentive to the activities within the peer helping group.	SA	A	U	D	SD
12. The peer helper engaged in practice activities where students prepared for helper roles and projects.	SA	A	U	D	SD
13. The peer helper was able to name and describe the high facilitative responses.	SA	A	U	D	SD

14. The peer helper demonstrated high facilitative responses in practice activities.	SA	A	U	D	SD
15. The peer helper initiated helping relationships during training.	SA	A	U	D	SD
16. The peer helper sustained a helping relationship during training.	SA	A	U	D	SD
17. The peer helper demonstrated they can be a careful listener during an individual interview.	SA	A	U	D	SD
18. The peer helper was able to identify the roles of peer helpers.	SA	A	U	D	SD
19. The peer helper was able to identify steps in the referral progress.	SA	A	U	D	SD
20. The peer helper was able to create problem solving strategies.	SA	A	U	D	SD
21. The peer helper was able to demonstrate facilitative feedback.	SA	A	U	D	SD
22. The peer helper was able to evaluate their personal progress.	SA	A	U	D	SD

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BIOGRAPHICAL SKETCH

Tom Summers was born in Boston, Massachusetts. He lived in Iowa, Mississippi, and Massachusetts before entering the first grade. Educated in the Massachusetts Public Schools for his primary and early secondary education, he finished high school in South Florida. After attending Palm Beach Community College, Tom enrolled at the University of Florida and received his bachelor's degree in education. He began teaching school in rural North Florida before moving to Gainesville and starting graduate school. Receiving his master's degree in 1973, he taught in the Alachua County Public Schools for almost 2 decades. After enrolling in counselor education at the University of Florida, he started and coordinated the peer helping program at Gainesville High School for 5 years. Currently, Tom shares counseling duties at Westwood Middle School in Gainesville, Florida.

Tom lives on a small farm outside Gainesville with his wife, Carla, and daughter, Malena, and enjoys playing tennis and golf, scuba diving, and sailing. Much of his free time during summers is spent traveling and has included the Carribean, New Zealand, Australia, United Kingdom, Society Islands, Africa, Latin America, and Europe.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Robert D. Myrick, Chair
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Larry Loesch
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Joseph Wittmer
Distinguished Service Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

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